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No. 12.

THE OCCURRENCE OF SPARGANUM (LARVAL CESTODE) IN THE SUBCUTANEOUS TISSUES OF MAN IN AUSTRALIA.

By J. Burton Cleland, M.D.,

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The occurrence of *Sparganum*, the larval form of members of the *Bothriocephalidae* family of tapeworms, is rare in man. In Manson's work on "Tropical Diseases," *Sparganum* (*Bothriocephalus*) *mansonii*, (synonym *Bothriocephalus liguloides*), is mentioned. This worm, which was first discovered by Manson himself, lying under the peritoneum in the neighbourhood of the kidneys and iliac fossæ in considerable numbers, measures in the original specimens about 30 to 35 cm. in length by about 2.5 mm. in breadth. Manson (1903 edition) also refers to one of the Australian records of the presence of *Sparganum* in man. As a matter of fact there are already two records of finding *Sparganum* in human beings in Australia, whilst the one now to be recorded makes the third definite case. In all Australian instances the parasite has been much smaller than that found by Manson, measuring from about 3.5 cm. to about 10 cm.

The first record for Australia is that by W. W. Spencer "[*Bothriocephalus Liguloides* (sic!); The Cause of Certain Abdominal Tumours." International Medical Congress of Australasia, Third Session, 1892, p. 433]. Spencer describes two cases, each occurring in the neighbourhood of Bathurst, in which tumours were found in the abdominal cavity. The second of these patients passed a worm about 10 cm. (four inches) in length *per urethram*. It appeared to have no sexual organs, was of a light pink colour without segments, and corresponded in both size and shape to Leuckart's specimen of *Bothriocephalus liguloides* A. (sic). Later a similar worm of small size was discharged from an incision into the tumour. From the similarity of this case to Spencer's first case, he thought the first one was also probably due to a similar parasite.

The second Australian case was recorded by Drs. MacCormick and Hill (Australasian Medical Congress, Seventh Session, 1905, page 367), the parasite being considered as *Bothriocephalus mansonii* or *liguloides*. The patient was a man who had never lived out of Sydney, except for a single fortnight's holiday at Penrith, some forty miles west of Sydney, six or seven years before he was found to be infected. Twelve months prior to admission to hospital, he had had a fatty tumour removed from under the skin in the upper part of the right lumbar region at the costal margin. A month later he noticed a similar swelling 6 or 7 cm. lower down. This was soft and fairly circumscribed and about the size of a hen's egg. On removal, a worm, 3.7 cm. long, was found in the centre of soft granulation tissue. Dr. J. P. Hill fully described the worm found, which had an estimated length of 3.5 cm. and a greatest breadth of 1.5 mm. The narrow

elongated body was flattened and unsegmented, and seemed to be crossed by numerous transverse wrinkles; it was broadest just behind the bluntly pointed anterior end and tapered gradually posteriorly. The head was not marked off from the succeeding portion of the body, and was small and only partially protruded. On its flat surfaces were recognizable the two longitudinal suctional grooves or "bothria" characteristic of the family *Bothriocephalidae*. He describes the microscopic appearance of sections which closely correspond with those met with in our case.

In November, 1913, Dr. C. W. Bruce, of Enmore, submitted to us a "cord-like substance," which had been withdrawn from a small inflammatory swelling in the front of the leg of a patient. Later the following history of the case was kindly communicated to us by Dr. Bruce. It appears that the patient was a business man in Sydney. About a year before the specimen was removed, he had noticed a small, hard swelling on the front of the leg, which remained about the size of a small Barcelona nut for a considerable time. It then became inflamed and tender, and discharged a little pus, the inflammation finally subsiding. When the scab over this area was removed the specimen came away. The patient had not lived in any country districts, but he had spent every week-end for years at a camp in Middle Harbour, Sydney.

The specimen as submitted was white, flattened, and almost like a piece of tape, and about 5 cm. long and nearly 1 mm. broad at its broadest point. With a hand lens, one end was seen to be frayed, having evidently been broken off, whilst the other end, which seemed injured, was bluntly truncated. With a low power of the microscope the body was found to be indistinctly striated longitudinally; no segmentation could be detected, and at the complete, though injured end, no grooves could be seen. Scattered throughout the body were oval concentrically marked bodies which should have given us a clue to the nature of the specimen we were examining. Unfortunately, at the time we did not recognize the parasitic nature of the ribbon-like substance, and it was only later when the specimen was shown to Dr. Nicoll, then of the Australian Institute of Tropical Medicine, who suggested that it was probably a *Sparganum*, that the clue to its real nature was obtained. The presence of the above-mentioned oval concentrically arranged calcified bodies should have at once made us think of a cestode origin, and should have led to its recognition as a *Sparganum*. On comparison of our microscopic sections with those of a partially segmented *Sparganum* from a *Varanus* (Monitor lizard), kindly given us by Dr. Nicoll, and also by comparison with Dr. Hill's description of his *Sparganum*, there remains not the slightest doubt as to the nature of our specimen, and there is also every reason to think that it belongs to the same species as that described by Professor Hill. Microscopically, the section of the parasite showed a rather thin cuticle, which was succeeded by a layer of nuclei, lying at right angles to

it. The parenchyma showed occasional delicate fibres with widely scattered small nuclei, and moderate numbers of concentrically marked calcareous corpuscles. These were about 8 μ or 9 μ in length and showed a central nucleus. The various body layers were not nearly so distinct as in the *Sparganium* from *Varanus*, received from Dr. Nicoll.

The occurrence of these larval bothriocephalids in man in Australia is undoubtedly an accident in the life history of the parasite in question, whose normal intermediate host must be looked for in some other animal. It would seem from the description of the three Australian cases that they probably all belong to the same species and that, as might be expected, this is probably different from Manson's Asiatic one. It seems not improbable that some reptile—possibly a snake or monitor—may be the ordinary intermediate host, and this is rendered more likely, inasmuch as our Australian mammals have been fairly well searched for parasites, and, as far as I am aware, no species of *Sparganium* has been detected in them. If these three cases have, more or less by accident, been recognized, it is quite possible that a number of other cases have been met with, but for various reasons it has not been possible for their true nature to be discovered. The possibility of unusual inflammatory swellings in the abdomen or in the subcutaneous tissues, being due to such helminthic parasites, should be borne in mind, and possibly in this way further cases may be discovered.

THE ASSOCIATED STUDY OF THE CLINICAL AND THE
MACROSCOPIC AND MICROSCOPIC APPEAR-
ANCES OF CARCINOMATOUS TUMOURS
OF THE BREAST.

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(Continued from page 219.)

VII.—Adeno-carcinoma.

Synonym: glandular cancer.

As a rule when atypical proliferation of epithelium once occurs, the resulting growth loses all semblance to glandular formation and extends rapidly in pre-formed connective tissue (or lymph spaces) its shape being determined by the rapidity of the growth and the space in which it proliferates. Not uncommonly a distinct acinous type is retained, the cells being arranged to enclose a central lumen (adeno-carcinoma).

English authors do not apply a special name to this type of tumour, for they point out that such an arrangement is usually only present in part of the tumour, whilst elsewhere the characteristic structure of spheroidal-celled cancer may be observed. American authors, on the other hand, describe this type as a definite clinical and pathological entity, which represents the first step in the deviation from typical epithelial proliferation. Bloodgood states that in this group the number of inoperable cases is least—the percentage of cures greatest—and the relative number of cases, which have been clinically doubtful, largest.

Clinical Picture.—Adeno-carcinoma usually appears as a small, single circumscribed growth fixed in the breast tissue of a woman over 40 years of age. It differs from the ordinary hard spheroidal-celled carcinoma in being softer, more vascular and growing to a larger size, and, above all, in having a pronounced tendency to form fungating outgrowths which are often pedunculated.

As a class they are not very malignant, even when they grow rapidly to considerable size.

Macroscopic Anatomy.—The cut surface of the tumour resembles other spheroidal-celled carcinoma, especially the simplex, being softer than, and not so infiltrating as, the hard spheroidal-celled carcinoma; but, at the same time, in being usually not quite as soft as the soft variety.

Microscopic Anatomy.—Typical portions of the tumour show abnormal acinous formation, the acini growing into large tubular spaces, lined by many layers of epithelial cells. In many of the tubes the epithelium makes "cell combinations, which have resulted in the formation of gland-like figures, circles, tubes, columns and minute papillae.

"Even when the tubes are completely filled with tightly packed cells, one can detect little circles of cells or little tubes which betray the tendency and ability which the cells still have to form definite combinations."

This description applies only to typical portions of the tumour, for many tumours show all stages and gradations from the above type, varying from formations closely resembling an adenoma to those of a hard spheroidal-celled carcinoma of the most atypical variety.

VIII.—Carcinoma Simplex.

This includes an indefinite group of spheroidal-celled carcinoma standing midway between the hard and soft varieties in their various characteristics; in other words, characterized by the more equal distribution of the amounts of connective tissue and epithelium present. On microscopical examination the form of the cell groups are seen to vary, some being polygonal, as in soft spheroidal-celled cancer, and others forming wide, elongated clefts or tubes, the so-called tubular carcinoma (Billroth).

IX.—Carcinomatous Cyst.

By this term is meant a cystic tumour, the walls of which are infiltrated with carcinoma, a class of case quite distinct from the malignant degeneration of a duct papilloma or of chronic interstitial mastitis associated with cysts. These cysts may arise in two ways:

- (a) Carcinoma and a benign cyst occur in the same breast in close juxtaposition to one another, and the cancer invades the wall of the cyst and forms a reddened excrescence projecting from its wall.
- (b) A small cancer, by obstructing and irritating a duct, occasions the formation of a cyst, in the wall of which the cancer subsequently appears.

Papillary excrescences are never present, a circumstance which distinguishes the neoplasm from columnar carcinoma. "Carcinomatous cyst" is not justified pathologically, as no particular kind of cyst is indicated. It is the rarest clinical type of cancerous disease of the breast, usually occurs in patients over

the age of 40 years, and is characterized by the appearance in the breast of a cyst, generally single, which grows rapidly but develops the signs of malignancy slowly. Owing to the uncertainty of clinical means, these cases must always be diagnosed by exploratory incision and inspection. According to Bloodgood, four points may determine the cancerous nature of the affection:—

- (i.) Blood-stained contents, in the absence of a papilloma to explain the hæmorrhage.
- (ii.) Thick, granular or grumous contents, derived from broken-down epithelial cells.
- (iii.) The presence, on palpation, of hard carcinomatous nodules in the inner wall of the cyst, or even diffuse infiltration of its walls.
- (iv.) A reddened excrescence growing from the wall of the cyst.

At this stage it is not out of place to devote a few remarks to so-called chronic interstitial mastitis, which of recent years has been alleged to be a pre-cancerous condition.

The doctrine that this disease demands total complete amputation of the breast is fraught with unusual danger and hardship to women, for it has not yet been definitely established that interstitial mastitis is a cause of cancer, but rather that cancer is present in a certain number of cases in which interstitial mastitis has developed. Until such time as the regressive changes that occur in interstitial mastitis are established or disposed of, as being precancerous in nature, the partial operation, consisting of the removal of the cysts, together with a considerable section of the breast tissue surrounding it, or in the most advanced cases simple removal of the breast, should be advocated.

In other words, the proper interpretation of the clinical, operative and macroscopical features of the lesion present should be the guide deciding the type of operation necessary to be performed in any given cases.

If carcinoma subsequently occurs in the same breast it should be dealt with as if it were an entirely distinct disease.

To sum up, we may state that all varieties of spheroidal-celled carcinoma arise from the epithelium lining the acini, but they are classified under different heads because of the arrangement of, and the varying proportions of, the connective tissue stroma with regard to the cancer cells.

If the latter proliferate very rapidly, a soft, bulky tumour is produced, rich in epithelium, and is called a soft spheroidal-celled cancer.

If, on the other hand, the proliferating power of the cancer cells is low, whilst the fibrotic processes are active, the atrophic scirrhus of old age results.

Between these two types every kind of growth will be found, the only difference being the relative proportions of connective tissue and cancer cells present. The growth of cancer cells is quickly followed by a change in the connective tissue contiguous to them, for the latter is stimulated to slow multiplication and forms connective tissue of a modified appearance and texture, the quantity formed having much to do with the general characteristics of the tumour itself.

Diagnosis.

Most of the classical signs of *carcinoma mammae* are not produced by the growth itself, but by the fibrotic

processes, which are the reaction of the host to the invading epithelium; hence they are only available when the disease has already made a certain amount of progress. In other words, the clinical pictures presented above are those of well-developed carcinoma, and these are the signs usually described in the modern text-books of surgery.

From the practical point of view these signs are totally inadequate, and they are often actually dangerous in lulling the practitioner into a false sense of security in those mammary tumours which do not present classical characteristics. When the text-book signs are developed, not only can a diagnosis usually be made by anyone, but often the golden moment for successful operation has passed. If the dictum that cancer is always primarily a local disease be accepted as a general proposition, subject to some exceptions, it may be stated very positively that the prospect of cure is greatest in those cases in which an early diagnosis is made.

The safest definition of "early" is that the growth is small, single and circumscribed, without palpable involvement of the regional lymphatic glands. The early diagnosis of *carcinoma mammae* will depend upon three signs, namely, the outline, the consistency of the tumour and its attachment in the breast substance. These physical signs are usually considered as being insufficient to form a diagnosis, and therefore other means must be adopted as well.

Some surgeons expose the lesion, cut out a piece or the whole of the tumour, then close the wound and wait a day or two for a careful microscopical diagnosis, based on a carefully prepared section. This method is undoubtedly the best from the pathologist's point of view; but from the standpoint of both surgeon and patient it is the worst; in fact, it is a most dangerous procedure, and should be condemned.

The diagnosis should be made by direct exploration of the tumour, so that its macroscopical or microscopical features (from a rapidly frozen section, stained with Unna's polychrome, methylene blue) can be studied. If the tumour be malignant, the wound is cauterized by the actual cautery or liquid carbolic acid, and closed, and the complete operation is performed. If, on the other hand, the tumour is not malignant, either the tumour, or part or even the whole of the breast, is removed, according to the nature of the benign lesion and the condition of the adjacent breast tissue.

In the great majority of cases the differential diagnosis of the macroscopical appearances of cancer of the breast is not difficult, for the appearances do not differ from those studied in the laboratory after operation. There are exceptions, which require great experience, but, as a general rule, it may be stated that, as the surgeon becomes more and more familiar with the naked eye appearances of benign and malignant tumours, even these difficulties become less. When possible, however, the diagnosis should be further confirmed by asking a competent microscopist to be present at the operation, preferably one versed in the study of frozen sections, as by this means a reliable report as to the nature of the growth will be furnished in about ten minutes.

A word of warning may here be spoken with regard to certain cancers, frequently termed "mobile car-

cinoma," which, in having a capsule almost as definite as that of a fibro-adenoma, closely simulate that condition. In such cases microscopical examination is the only safeguard against a fatal mistake, for, although such tumours appear encapsuled, it is improbable that their surroundings are free from invasion. Handley states that a supposed fibro-adenoma beginning after the age of 40 is more likely than not to be a cancer.

In conclusion, it may be stated that it has been proved that exploratory incision into early carcinoma, which are clinically doubtful, if followed immediately by the modern complete operation, does not diminish the probability of cure. Therefore, in all cases in which the diagnosis is in the least doubtful, an exploratory incision is advisable, and the surgeon must obtain the patient's consent to proceed then and there to perform the radical operation should the condition prove malignant.

Before proceeding with the radical operation, however, it is important that the operator's hands and the skin of the patient should be re-sterilized, as well as the instruments employed, for the danger of infecting the surrounding tissues with cancer cells is not a mere theoretical one.

Prognosis.

Any estimates of the duration of life to which we may commit ourselves, are apt to be rudely falsified, for we are unable to estimate the resisting power of a patient. Our knowledge of the nature of this resistance is entirely speculative; but some people seem to be much better culture media than others, and this difference in susceptibility is thought by some to be due to the chemical, rather than the physical, composition of the host. If we have to make deductions concerning future eventualities from the type of tumour removed, there must be a simplification of the nomenclature, a more general agreement as to what the different neoplasms should be called, and criteria established by which the different species can be recognized and assigned to their respective group.

Nothing shakes the confidence of the public in the medical profession more than bad prognosis founded on insufficient data. Opinions of this kind are little better than rough guess-work. The most that can be done at the present time is to say that the order of malignancy of *carcinoma mammae* is acute cancer, soft spheroidal-celled, hard spheroidal-celled, adeno-carcinoma, colloid carcinoma and atrophic scirrhus; the first being the most malignant and the last the least so.

All statements as regards the duration of life must be founded on the clinical type of growth, the progress and duration of the growth, the macroscopical and microscopical appearances of the growth, and also on the statistical tables of the estimated average duration of life as regards each variety of tumour. It must be remembered that not only do all gradations occur between the various types of carcinoma enumerated, but that these gradations may also occur in different parts of the same tumour. Hence the fallacy of making estimates on the histological characters of a small fragment of a tumour.

Treatment.

It should always be borne in mind that the essential thing in the treatment of cancer is to stamp out the

disease. All other considerations should be disregarded, with the single exception of the safety of life. It may be said here, however, that the modern operation, as now performed by the most conscientious surgeons, is always to be preferred to the feeble imitations that one occasionally sees even at the present time.

In planning the technique of this operation, one must consider the different elements which have become recognized as essential to permanent success.

- (1) Sufficient tissue must be removed immediately about the malignant growth, and this must include every particle of breast tissue.
- (2) All lymphatics and lymphatic glands must be removed without section in one mass.
- (3) A suitable plastic procedure should be performed, so as to secure union by first intention.

There is no question of the truth of the dictum of Watson Cheyne: "The patient's chance is in the first operation, and, therefore, the earlier and more radical the removal of the cancerous breast the less the probability of recurrence." In other words, an incomplete operation for cancer of the breast offers the patient little more probability of cure than if there had been no operation at all.

In conclusion, let me quote the excellent advice of Rodman: "He who advises a woman with a tumour of her breast, especially a woman past 40, to wait and see if it be malignant, is guilty of an unwarrantable, and, therefore, censurable, act. If he cannot make a diagnosis there are others who can in nearly every case; and in all cases, by a perfectly easy, safe and quick exploration."

Literature.

- Adami and Nicholls—*Special Pathology*.
 Barrie—*Annals of Surgery*, December, 1916.
 Billroth—*Surgery*, Vol. II., 1878.
 Birkett—*Holmes' Surgery*, Vol. IV., 1870.
 Bloodgood—*Surgery, Gynecology and Obstet.*, 1906, Vol. II., p. 721.
 Bloodgood—*Journ. Americ. Med. Assoc.*, Vol. LIII., 1909.
 Bloodgood—*Journ. Americ. Med. Assoc.*, Vol. LXVI., 1916.
 Bonney—*Lancet*, May, 1908.
 Brogart—*American Practitioner*, Vol. XLVIII., 1914.
 Bryant—*Diseases of Breast*, 1887.
 Bunts—*Annals of Surgery*, August, 1915.
 Cheyne—*Lancet*, 1904, Vol. I., p. 701.
 Cooper—*Diseases of Breast*, 1829.
 Deaver and McFarlane—*The Breast*, 1917.
 Ewing—*Medical Record*, December 4, 1914.
 Greenough and Simmons—*Annals of Surgery*, Vol. LX., 1914.
 Gross—*Tumours of Mammary Gland*, 1880.
 Halsted—*Trans. of Amer. Surgeons' Assoc.*, 1907, Vol. XXV., p. 61.
 Halsted—*Annals of Surgery*, Vol. XX., 1894, p. 497.
 Handley—*Cancer of Breast*, 1906.
 Handley—*Choyce's Surgery*, Vol. II., 1914.
 Henderson—*Lancet*, September 18, 1909.
 Hertzler—*Treatise on Tumours*, 1912.
 Hubbard—*Boston Med. and Surg. Journ.*, Vol. CLXVII., 1912.
 Johnson and Lawrence—*Choyce's Surgery*, Vol. I., 1913.
 Judd—*New York Med. Journal*, Vol. XCV., 1912.
 Kirschheim—*Archiv. fur Klin. Chirurgie*, Vol. LXVII., 1902.
 Lambert and Harris—*Journ. Americ. Med. Assoc.*, Vol. LVI., 1911.
 Leitch—*The Lancet*, September 18, 1909.
 Lockwood—*British Medical Journal*, January 27, 1906.
 Lockwood—*Cancer of the Breast*, 1913.
 MacCarty—*Mayo Clinics*, 1915.
 Murphy—*New York Med. Journ.*, Vol. LXXXIII., 1906.
 Nunn—*Cancer of the Breast*, 1882.
 Paul—*Proceedings Royal Soc. Med.*, Vol. VII., Surg. Section, p. 276.
 Pilcher and Pilcher—*Annals of Surgery*, May, 1917.

- Primrose—*Journ. Americ. Med. Assoc.*, Vol. CXLV., 1913.
 Rodman—*Diseases of the Breast*, 1908.
 Schumann—*Annals of Surgery*, July, 1911.
 Shaw—*St. Bartholomew's Hospital Journ.*, May, 1904.
 Sheild—*Diseases of the Breast*, 1898.
 Speese—*Annals of Surgery*, February, 1910.
 Stewart—*Journ. Americ. Med. Assoc.*, Vol. XLIII., 1904.
 Stiles—*British Medical Journal*.
 Stiles—*Edinburgh Medical Journal*, Vol. XXXVII., 1892.
 Syms—*Annals of Surgery*, December, 1916.
 Warren—*Annals of Surgery*, December, 1904.
 Warren—*Journ. American Med. Assoc.*, Vol. XLV., 1905.
 Williams—*Diseases of the Breast*, 1894.
 Velpeau—*Diseases of the Breast*, 1856.
 Volkmann—*Beiträge zur Chirurgie*, 1875.

Reports of Cases.

THROMBOSIS OF MESENTERIC VESSELS.¹

By H. Gilbert, M.B., B.S. (Melb.), F.R.C.S. (Eng.),
 Adelaide.

Mrs. R., *et. 39*, a primipara, had been married thirteen years. She had had no miscarriages, and had previously been healthy, except for occasional abdominal pains attributed to flatulence. The pregnancy had been normal, except for slight indigestion. Labour began at 1 a.m. on March 25, 1918, and a male child, weighing 3,345 grammes, occupying the left occipito-anterior position, was delivered instrumentally at 8.45 a.m. The placenta and membranes (both complete) were expressed without difficulty a quarter of an hour later. There was an incomplete rupture of the perineum, requiring three sutures. Slight hæmorrhoids were present.

She was comfortable for the first day, except for urinary retention, but did not sleep much that night.

The following day (March 26, 1918) pain began to develop in the lower abdomen, apparently over the uterus, which seemed tender. Catheterization did not relieve the pain in any way. The abdomen was slightly distended. An aperient was ordered, and was repeated in the evening, as there had been no action of the bowels or passage of flatus, and the temperature had risen to 37.6° C. She again did not sleep well, owing to pain in the lower abdomen, which was localized more to the right of the uterus, where a sense of resistance had become noticeable, and the whole abdomen was much distended.

At 9 a.m. on March 27 a soap and water enema was given, without any result; a quantity was retained. At 11 a.m. a high turpentine enema was applied, preceded by half a phial of pituitary extract. This resulted in a very slight bowel action and the passage of a little flatus, but the distension was increasing and the patient was restless and felt sick. At 12.15 p.m. half a phial of pituitary extract and 0.06 gm. of calomel were given. At 2.15 p.m. a further dose of 0.06 gm. calomel was given. The patient passed a little flatus. At 3.45 p.m. she vomited for the first time. She was restless, and there was increasing pain in the lower right segment of the abdomen, where tenderness and a sense of resistance were becoming more marked. At 4.15 p.m. a "2-4-8" enema was given, but was not retained. The patient vomited. At 4.45 p.m. she passed flatus freely, and at 5 p.m. she was more comfortable; she then became free from pain; the abdomen was less distended, but just as tender and resistant in the right lower quadrant.

At 2 a.m. on March 28 it was reported that she had been very restless, calling out with pain. The abdomen was acutely tender and distended. She had vomited five times. A turpentine enema was given at 2.15 a.m., without result. At 2.50 a.m. 0.007 gm. of morphine was injected, after which she slept quietly for four hours and passed a liquid stool on waking. Dr. Marten kindly saw the patient with me at 8 a.m., to discuss the advisability or otherwise of operation, and it was decided to go on with purgative measures. At 8.30 a.m. 15 c.c.m. of *Ol. Ricini* were given, and the report at 6 p.m. was that she had had a rather more comfortable day, though the pain in the right side had at times been very severe. She had taken very little nourishment, owing

to nausea and sense of fullness, due to the distension. At 6.30 p.m. a "2-4-8" enema was given. It was hardly retained at all, but was followed by free passage of flatus and a liquid motion.

She spent a restless night, in spite of an injection of 0.007 gm. of morphine, and vomited once. She had a fluid bowel action. At 6 p.m. on the 29th it was reported that she had had a slightly more comfortable afternoon, but the abdomen was still distended, and the pain very acute at times. The lower right segment of the abdomen was more rigid. The pulse-rate, which had previously not exceeded 112, had risen to 120 or 130; the pulse was of poorer volume. Dr. Marten again saw her with me, and it was decided to explore the abdomen. This was done shortly after 8 p.m.

Dr. G. C. Hayward gave the anæsthetic, and the abdomen was opened by the grid-iron method, as for a high appendix removal, and the wound subsequently enlarged by stretching. The parietal peritoneum was dusky, and as soon as it was opened a quantity of prune-juice coloured fluid gushed out. Dr. Marten, who had assisted Dr. Scott at another operation, immediately declared the diagnosis of thrombosis of the mesenteric vessels. The appendix, which had been regarded as likely to be at fault, merely shared in the general engorgement. A quantity of prune-juice coloured fluid was mopped out. Many distended coils of ileum presented, covered with prune-coloured lymph, and in many places were adherent to each other and to the anterior abdominal wall. The coils, where not covered with lymph, were deeply congested, but nowhere gangrenous. The uterus had a small myoma to the right of the fundus, which had previously been felt through the abdominal wall. Rubber tubes were inserted in the pelvis and right renal pouch, and the wounds were rapidly closed.

The patient left the operating-table at 8.50, with a pulse-rate of 160, and died at 11.30, having previously passed a large fluid motion of pea-soup colour and consistence.

After the initial rise of temperature on the second day to 37.6° C. there was no subsequent rise above 37.2° C., indicating the absence of any septic process, and the condition of the lochia was not suggestive of any uterine infection.

The various authorities I have consulted describe two types of mesenteric thrombosis: (1) Arterial, due to embolism, obliterative endarteritis or traumatism, and (2) venous, secondary to some septic process, such as appendicitis or typhoid ulceration. The constipation is commonly not absolute, and in quite half the cases the evacuations are deeply blood-stained. None of the motions in this case contained any trace of blood.

It appears impossible in any given case to say which side of the circulation is at fault without autopsy and dissection of the vessels, unless there is some obvious, probable cause, such as aortic disease or definite sepsis. The majority of cases occur in people past middle life.

The only reference that I have been able to discover bearing on the condition as a complication of the puerperium appears in a book on puerperal sepsis by Lea, of Manchester. In a short paragraph he mentions that severe sepsis may be accompanied by marked gastro-intestinal symptoms, and that thrombosis of the vessels of the stomach and intestines may occur.

A CASE OF THROMBOSIS OF MESENTERIC VESSELS.¹

By T. Steele Scott, M.B., B.Ch. (Roy. Univ. Irel.),
 Adelaide.

Mrs. N., aged 26 years, was delivered of her third child on October 2, 1915. The birth was natural and easy, and the puerperium uneventful, except that it was noticed that there was some intestinal distension causing fullness of the abdomen for the first week after delivery. Patient was never a very robust girl, was constipated, anæmic and of rather a nervous disposition.

She left the nursing home at the end of three weeks, and was getting about at home for one week in good health.

On Sunday, October 31, she was feeling very well, and had dinner of roast lamb, including some kidney, followed by trifle. At the time of eating she thought that the kidney was slightly tainted. She had evening tea and a glass of milk before retiring. She noticed that her abdomen was distended and uncomfortable, and therefore took a dose of

¹ Read at a Meeting of the South Australian Branch of the British Medical Association on July 25, 1918.

¹ Read at a Meeting of the South Australian Branch of the British Medical Association on July 25, 1918.

castor oil. Soon after she began to have acute abdominal pains and vomiting.

I saw the patient about three hours later, when she was in acute pain all over the abdomen, which was slightly distended and tender on palpation. The pulse was rapid and wavering. The temperature was not elevated. The patient felt faint at times. I gave her a hypodermic injection of morphine and applied mustard to the abdomen, followed by hot water bottle, and ordered a soap and water enema.

I saw the patient on the following day, when there was still abdominal pain, distension and violent, liquid, offensive diarrhoea, which poured away in bed. The pulse was rapid and miserable. The temperature was normal. There was no rigidity of the abdominal muscles and no absence of the liver dullness. Good abdominal movements were detected during respiration. She could move her legs freely, and her facial expression was good. Abdominal palpation caused pain. The pain was more marked on the right side of the abdomen.

Having elicited the history of a tainted kidney, I looked on the case as one of severe ptomaine poisoning, and considered that the patient was in a critical condition. I therefore asked the late Dr. Todd to meet me in consultation. After carefully examining the patient, we came to the conclusion that it was a toxic condition, causing partial obstruction, that there was no evidence pointing to a ruptured viscus, and that the condition might be remedied by medicinal means. Exploration did not appear to be justifiable at this time. The temperature was normal and the pulse-rate 96, but wavering.

Pituitary extract (1 c.cm.) was administered in two doses, but with no appreciable result. Emetics were administered several times during Tuesday, with partial result, but no flatus was passed, although borborygmi could be distinctly heard. Small doses of morphine and strychnine were given at intervals.

During Monday and Tuesday there was no vomiting and no proper movement of the bowels.

Until near the end of the second day of illness there was no elevation of temperature. It then went up to 40° C., quickly dropping and remaining about 38.3°.

Dr. Marten saw the patient with me on Tuesday afternoon, and agreed with the opinion already formed.

Three decigrams of calomel were given in hourly doses of 0.06 gm.

On Wednesday the patient began vomiting. Her abdomen was more distended. The temperature was 38.3° C., and the pulse-rate 120 to 130. The enemata administered were retained. Considering the condition very grave indeed, and that exploration gave the only chance, I asked Dr. Marten and Dr. Todd to see the patient again.

It was decided that exploration gave the only possible chance, the patient was removed to a private hospital. Laparotomy was performed; the abdomen was opened in the middle line. Some serum was found in the abdominal cavity and flakes of lymph on the intestines. On drawing up the caecum the appendix was found intact. On exposing more of the large intestine it was found to be gangrenous, the condition commencing within a few centimetres of the caecum. As much of the large intestine as was exposed was in a gangrenous condition, showing that there was evidently thrombosis of the right colic artery. As the patient's condition was very grave indeed, a Paul's tube was inserted into the small intestine and the abdomen quickly closed. The patient died about four hours later.

Thrombosis of mesenteric vessels was discussed as a possible cause before the laparotomy disclosed the condition. Two points I would like to emphasize, *viz.*, first, palpation along the course of the ascending colon always caused pain in the early stage of the illness, and, secondly, the profuse diarrhoea, which suddenly stopped, and was caused, to my mind, more by the irritation of the bowel before it finally became gangrenous than by the dose of castor oil which was administered before I saw the patient.

Reviews.

PELVIC TUMOURS.

Notwithstanding the number and excellence of recent works on gynaecology, the appearance of Cuthbert Lockyer's book

on fibroids and allied tumours¹ will be welcomed by all lovers of their art. Purporting to deal with but one section of the diseases peculiar to women, the work in reality covers almost the entire field of pelvic surgery as regards the surgical technique of operations and after-treatment. It includes also a description, well illustrated, of the various complications—intestinal, ureteral and other—which may, and sooner or later will, be encountered in pelvic operations, and the most modern methods of successfully dealing with them.

Dr. Cuthbert Lockyer is well known to many Australian surgeons as one of the most brilliant operators in London, and, more than that, as a man who, by hard and conscientious work, has established for himself a world reputation as a pathologist and clinician.

The book is divided into three parts: Part I. deals with myoma, Part II. with adeno-myoma, whilst Part III. has been devoted to a detailed description of the various operations—vaginal and abdominal—for the removal of these tumours. The author rightly holds as an article of belief that no one should undertake the surgery of the pelvis unless he has the requisite knowledge and experience to deal with intestinal and other complications. These are therefore fully treated in the last chapter.

The author states in the preface that the book is an attempt to show that the opportunities which he has had for the study of pathological and clinical material during the past twenty years have not been entirely lost. The individuality of the work is emphasized by Mr. Alban Doran in his introductory notice, and, indeed, is reflected in almost every page of the book.

The reader may therefore rest assured that this is no mere compilation, but embodies the experience of one who is a master of the subject of which he treats.

Turning to debatable points: in aetiology the influence of heredity seems favoured, and, in accord with the most modern teaching; hyper-activity of the ovaries is given the chief place. The statistics quoted indicate that these growths are more frequent in the married, but the general opinion is the reverse of this. Balls Headley, in his work, "The Evolution of the Diseases of Women," published in 1894, definitely attributed to unsatisfied sexual desire and unsatisfied maternal instinct a marked influence in the development of myomata. The reviewer has met with cases which lend support to this view.

The secondary changes to which fibroids are liable are most interestingly described and beautifully illustrated. "Necrobiosis is a passing phrase, leading to necrosis." "Hæmolytic is the predominant change in red degeneration." "Staphylococci are sometimes found in growths thus altered." "Acute toxic symptoms may then occur." "Injury to the capsule of a tumour by the point of a sound is a common cause of sloughing." This latter statement is a warning which should be taken to heart by every practitioner. The reviewer has recently removed by total hysterectomy a myoma containing a large abscess following upon a curettage.

In connexion with malignant changes in myomata, the author states: "Myomas, being mesenchymal growths, cannot undergo any but a mesoblastic type of malignant change," *i.e.*, sarcomatous. Clinical experience, we believe, is in accord with this statement. Cullen's statistics give the percentage of such change as 1.21. Instances of adeno-carcinoma associated with myoma are not infrequently met with. Some authorities have ascribed to myoma a tendency to excite carcinoma in the neighbouring endometrium, but Dr. Lockyer says "one growth cannot be said to predispose to the other."

There is a most valuable few pages on the appearance and diagnosis during operation of a displaced and altered ureter. Kelly's sign of vermicular contraction, produced by stroking with the handle of the scalpel, is emphasized.

Myoma in relation to pregnancy is very fully treated. Expectancy, with close observation of the patient, is rightly advocated. The opinion can be endorsed, that in performing Cæsarean section with a dead child and signs of infection the uterus, with its contents, should be removed entire, unopened.

With regard to palliative treatment, certain measures are mentioned, only to be condemned. Is it necessary even to

¹ Fibroids and Allied Tumours (Myoma and Adenomyoma). Their Pathology, Clinical Features and Surgical Treatment, by Cuthbert Lockyer, M.D., B.S., F.R.C.P., F.R.C.S., with an Introduction by Alban Doran, F.R.C.S.; 1918. London: Macmillan & Co., Limited; Royal Soc., pp. 580, with 516 illustrations, including 37 coloured plates. Price, £3 8s. net.

mention them? Other means, such as pessaries, are mentioned, and by implication recommended. Pessaries are worse than useless.

The advantages and disadvantages of the use of X-rays, radium and mesothorium are fully set forth; the disadvantages predominate.

The general operative mortality is given as 2%. As about 5% of myomata are associated with malignant disease, it is evident the patients' interests are best served by operation, provided some definite indications exist in the particular case under consideration. "It would be most reprehensible to perform hysterectomy for a symptomless tumour, or in the presence of serious organic disease of other organs."

With regard to methods, the author says that he frequently employs the vaginal route, with, when necessary, *morcellement*. In the judgement of many experienced gynaecologists the abdominal route is the better. "Myomectomy is applicable only to those cases where there are one or two growths and where they are sub-serous." This is in accord with prevailing opinion.

Total hysterectomy is preferred to sub-total, "except for spinsters and elderly married nulliparæ, i.e., in patients in whom the risk of cancer occurring in the cervix is reduced to a minimum." Even spinsters are not exempt from such a catastrophe, as was shown in a case reported in this journal last year by Dr. Worrall.

It is gratifying to note that the author, in dealing with the removal of ovaries in hysterectomy, strongly favours sparing these organs.

Adeno-myoma is very fully discussed and illustrated. The author pertinently draws attention to the fact that these interesting growths are not confined to the uterus, but may also occur in the stomach and bowel and elsewhere. In the recto-genital space they form tumours most puzzling to the operator, taxing his skill and knowledge to the utmost. Every surgeon should familiarize himself with the results of accumulated experience and scientific research lucidly set forth in these chapters.

Morcellement and enucleation *per vaginam* are advocated for large submucous myomata, even if as large as a five months' pregnancy, if the lower pole has presented in the vagina and has undergone infection and sloughing. An alternative plan which has been successfully practised in large tumours is to cut away all necrotic tissue, to apply tincture of iodine freely and then to do abdominal total hysterectomy.

Vaginal hysterectomy is well described and graphically illustrated. There is one point of great practical importance which should have been included in the author's splendid description of the technique, and that is to take pains to separate and push up the bladder *at each side*, in order to ensure the safety of the ureters. "Dissection off the cervix" may still leave these structures in danger.

Dr. Lockyer has the London confidence in silk as the best ligature material. Few Australian surgeons will endorse this. Another point in the technique with which we cannot agree is the use in abdominal section of Faure's or any other fixed automatic retractor. A retractor held in the lower angle of the wound and moved according to requirements exerts less injurious pressure, and is more useful. The Crile method of nerve blocking by injecting novocaine into each layer of tissue before incision is followed by the author. Many hold this to be a needless complication. In the absence of hæmorrhage, rough handling and prolonged operation there is no shock.

Dr. Lockyer stands on the right of the patient. He uses thin rubber sheeting to pack off the intestines and prevent the gauze pads adhering. The technique of the different methods of performing sub-total and total hysterectomy is clearly described and beautifully illustrated. Many practical points are emphasized.

There are two most valuable chapters on the after-treatment and on complications following operations. The bowels are moved by aperients on the second day. This practice has been abandoned by several prominent Australian gynaecologists, in favour of enemata on the third or fourth day. By the latter method there is less suffering from gas pains. No mention is made of morphine as a means of combating shock.

There are many other points which we should like to touch upon, did space permit.

The book will be read with pleasure, and will be a valuable addition to the library of every surgeon and pathologist.

LORD LISTER.

During the seventeenth and eighteenth centuries many bearing the name of Lister could be found in the village of Bingley in Yorkshire. Bingley lay in a winding valley through which a stream wanders. The slopes of the hillsides were partly cultivated, partly given to heath lands, or wooded rock-strewn wilds and were graced here and there with an isolated farm. About 1720 Joseph Lister, eldest son of a malster and farmer, who had adopted the Quaker persuasion was fired with ambition, and migrated to London. He commenced business in Aldersgate Street, and there his eldest son, John Lister, was born. John Lister became a successful merchant. Although married before thirty, and blessed within a few years of marriage with two daughters, he had an only son, Joseph Jackson Lister, born out of due season, when he was 49 years old. This son was an eminent member of the Society of Friends, and an accomplished optician who was elected a member of the Royal Society for his researches, leading to the discovery of the achromatic lens. When Joseph Jackson Lister visited Bingley in 1817 he found that his family was represented by an aged working labourer and an elderly widow, both children of sisters of his grandfather. The family was practically extinct. Joseph Jackson Lister married Isabella Harris, the daughter of a master mariner of Maryport, a Quaker, whose family had followed the sea, and traded from the Derwent, in Cumberland. Their fourth child was Joseph Lister, who was born at Upton House, a capacious Queen Anne residence, with garden and meadows, lying on the Romford Road in Essex. The student of heredity may study with profit the influence of the removal to London of the yeoman from Yorkshire.

The story of the life of Joseph, Lord Lister, is told by his nephew, Sir Rickman Godlee, in a book¹ destined to become a classic of English biography. Having lived for many years in close personal contact with his uncle, the author is able to portray the motives which influenced many of the actions of his uncle. He is also able to describe with feeling the sentiments which served to mould the line of action adopted by Lister in promulgating his magnificent discovery. This account of Lister's work and life is of special interest in that it consists mainly of an accurate record of the scientific labours of one of the greatest benefactors of humanity. Not only does it give such a detailed description as will enable the scientific investigator in the same paths as were trodden by Lister, to follow minutely the scope of the labours of this untiring scientist, but it provides an entrancing and inspiring narrative of human interest which will ensure the attention of every reader who will take up this book. Lord Lister himself had expressed the wish that any biography for himself which might be prepared by those who had lived in personal association with himself, should consist of a simple record of the facts which he had accumulated in the course of his scientific pursuits.

Joseph Lister was born on April 5, 1827. He was educated at two private schools, firstly at Hitchin, and afterwards at Grove House, Tottenham. He was forward for his age, especially in classics, but his letters to his parents show that his interests and amusements were those of ordinary school boys. He devoted much time to the composition of essays, and preserved a number of these early literary attempts. One of these dealt with the similarity of structure between a monkey and a man, and was illustrated with pen and wash drawings. At an early age he commenced to macerate bones, to dissect fish and small animals and to articulate skeletons. In 1844, at the age of seventeen, he was sent to University College, London, where he spent three years in obtaining a degree in Arts. Shortly after finishing his preliminary education he was attacked with small-pox. In consequence of the failure of his health, he took a long holiday in Ireland before commencing his medical studies. His knowledge of the preliminary sciences was mainly due to

¹ Lord Lister, by Sir Rickman John Godlee, Bt., K.C.V.O., M.S., F.R.C.S.: 1917. London: Macmillan & Co., Ltd. Royal 8vo., pp 676, with illustrations. Price, 24s. 6d.

the botanist, Lindley, and to the eminent physicist, Graham. The men of science who exercised the greatest influence upon him, were Wharton Jones and William Sharpey. Through Sharpey he was brought into touch with Allen Thomson and James Syme. Sharpey, Allen Thomson and Syme were the presiding geniuses over Lister's career. At University College Hospital Lister came under the influence of Walshe, Jenner, and Erichsen. As a freshman he was present at the first operation performed under ether in London by Robert Liston in December, 1846. In 1852, he obtained the M.B. degree of the University of London and the Fellowship of the Royal College of Surgeons, bringing to an end his long student-ship of nine years. During the latter part of his training he had done some original work, microscopic and experimental, dealing with the muscular tissue of the iris and with the involuntary muscle fibres of the skin. These papers attracted the attention of the eminent anatomists, Owen and Kölliker.

When the time came for leaving University College, Sharpey suggested to him that he should complete his studies by attending the practice of Syme in Edinburgh. Lister was greatly impressed with the Infirmary and with the surgical practice of Syme, who was then at the height of his fame. Shortly after his arrival in Edinburgh he was appointed resident house surgeon to Syme at the Infirmary. After holding this position for about a year he commenced private practice in Rutland Street, Edinburgh. In Edinburgh there sprang up a mutual attraction between Lister and Syme's eldest daughter, Agnes. In April, 1856, they were married, and made a wedding tour through Brussels, along the Rhine to Switzerland, thence to Milan, by Venice to Vienna, through Dresden to Berlin, and finally home by Paris. On returning to Edinburgh Lister devoted much attention to the subjects of inflammation, coagulation of the blood, and spontaneous gangrene. The fame of these researches gained for Lister the appointment of Regius Professor of Surgery in the University of Glasgow. From 1860 to 1869 Lister practised his profession in Glasgow. Shortly after his arrival in the city he received a surgeonship in the Royal Infirmary. In this institution he performed the experiments which led to the evolution of the antiseptic system of treating wounds. The epoch-making paper recording Lister's first observations on this system appeared in the *Lancet* between March and July, 1867. The first reception of the new doctrine was, on the whole, favourable, though a severe attack was made upon the method by Sir James Simpson. Lister emphasized the fact that he had discovered a principle and not a new drug, carbolic acid. Lister ever listened with disgust to the description of the antiseptic treatment by the phrase "carbolic acid treatment." In 1869 he was elected to the Professorship of Clinical Surgery in Edinburgh, a position which he held until 1877. After his return to Edinburgh he commenced a study of bacteriology, and began correspondence with Pasteur, whose writings had supplied to him the basis on which his practical surgical treatment was built. Edinburgh witnessed the introduction of the spray, that surgical adventure which tried so greatly the faith of the early disciples of Listerism. During the years in which Lister was at Edinburgh, took place those tumultuous struggles in Great Britain and on the Continent which accompanied the establishment of the surgical revolution. In 1875 Lister took a journey to the Continent, which brought him into contact with many of the leading surgeons of the day. In the same year he was appointed to a seat on the General Medical Council, a position which made him intimately acquainted with the leaders of the medical profession in London. In 1876 he was invited to accept the Professorship of Surgery at King's College, London, and in September he accepted the position. In 1879 he journeyed to Amsterdam to take part in the Sixth International Medical Congress. He was received by the whole Congress with an enthusiasm which knew no bounds. When he stepped forward to the desk to open his address the whole assembly rose to their feet. With deafening and repeated rounds of cheers, and with waving of hats and handkerchiefs, the members hailed the distinguished surgeon with acclamations, renewed minute

after minute and time after time as his name was called by some grateful acolyte.

Soon after his arrival in London honours fell thick around him. Since 1870 he had been Surgeon-in-ordinary to the Queen in Scotland, and soon after he came to England he was appointed Surgeon-in-ordinary to Her Majesty on the death of Mr. John Hilton, in October, 1878. He received the LL.D., Cantab., in 1880, and the D.C.L., Oxon., in the following year. In 1883 a Baronetcy was conferred upon him. During the next ten years Lister was engaged in laying down the principles which had guided him in the treatment of wounds and fractures.

In 1891 the British Institute of Preventive Medicine was incorporated to encourage the study of means for preventing and curing the infective diseases of men and animals, and to provide a place where a research might be carried on for these purposes. A site for the Institute was secured in Chelsea Gardens, on which a new building was erected in 1897. This Institute was at first called the Jenner Institute of Preventive Medicine. In 1903 the name was again changed to that of the Lister Institute. Before this date a great change had come over the British Institute of Preventive Medicine, since a noble gift of a quarter of a million pounds by Lord Iveagh had provided a noble building, designed by Alfred Waterhouse, and adequate remuneration for the staff. In 1903 Dr. C. J. Martin was made first Director of the Lister Institute. Lord Lister lived sufficiently long to see the present noble structure in full work. In 1895 Lister was elected President to the Royal Society of London. At the early age of 33 he had been elected a Fellow. Three years after his election he delivered the Croonian Lecture in 1863 on the coagulation of the blood. In 1880 he was awarded one of the Royal Annual Medals. From 1881 to 1883 he served as a member of Council, and in 1893 he acted as foreign secretary. Only once previously had a surgeon been President of the Royal Society. In 1897, the year of Queen Victoria's second jubilee, Lister was elevated to the Peerage as Baron Lister. In his letter offering him this honour Lord Salisbury dealt upon the extraordinary services of Lister to science, and especially to the beneficent science with which Lister was professionally associated. On the occasion of his eightieth birthday he was presented with his collected papers, which appeared in two sumptuous quarto volumes, published by the Clarendon Press in fine bold type, with many reproductions of his drawings. He died in 1912.

Few men have received greater recognition of their achievements in their lifetime than Lord Lister. We may indeed regard it as an omen of good import of the advance of civilisation that one, whose benefaction to humanity lay in the peaceful path of the relief of pain and suffering and the lengthening of the days of life, should be hailed by his fellows as deserving of the highest honours that can be paid to a living man. No more pleasant occupation can be imagined than to pass some hours in company with this biography, which brings so intimately before us a master craftsman of the surgical art. Lord Lister has indeed been fortunate in obtaining a biographer who could paint him as he was, and who possessed such a mastery of English and a strength of diction to fit his language to his subject.

OLD GOLD AND SILVER WAR FUND.

The Committee of the Old Gold and Silver War Fund (of New South Wales) have decided to devote all moneys received by them from the sale of their goods between October 1 and November 1, 1918, to "A Day for Jack." They therefore invite all "Jack's" sympathizers to send in a donation of old jewellery, or some gold or silver article, no matter how small, battered or broken; coins, electroplate in usable condition, and artificial teeth are also welcome. Parcels may be sent to the Head Depot, City Mutual Chambers, 62 Hunter Street, Sydney, or to any country or suburban branch of the Bank of New South Wales or Commercial Banking Company of Sydney.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 21, 1918.

Uniform Medical Curricula in Australia.

At present there are three Medical Schools in the Commonwealth of Australia. These schools are situated in Sydney, Melbourne and Adelaide. The diplomas granted as a result of study in these schools are issued by the Universities of Sydney, Melbourne and Adelaide after due examination. These diplomas are recognized by the Medical Boards of the various States of the Commonwealth as constituting evidence of sufficient training to entitle the holders to practise medicine under legal registration. To obtain these diplomas it is necessary to attend a series of courses of instruction at the University for a period of five years and to pass specified examinations at due intervals. At present the number of medical schools in the Commonwealth is small, but the day is not very distant when each State will possess its institution for training its own medical practitioners. Not only so, but further medical schools will be founded in the larger States. The medical schools at Sydney and at Melbourne have attained a size equal to that of the largest schools of the Old World. They do not, however, suffice to educate sufficient of the Australian youth to supply the community with medical practitioners. Until the outbreak of war a greater number of medical practitioners registered each year in the different States from abroad than from the Australian Medical Schools.

The standards that have been set by those in control of the Medical Schools in Australia have been sufficiently high to gain an excellent reputation for those holding the medical degrees of the Australian Universities. No effort has been spared in ensuring that every person who will bear the hall-mark of the Medical Schools of these Universities, will have received thorough, systematic training. No student has received a diploma which will give a title to practise medicine, without completing the courses of instruction and without passing the examinations scattered through the course. The authorities of the Univer-

sities have insisted that they are educational, as well as examining, bodies, and that those who wish for their certificates, must complete a sufficient part of their training in their Medical School. In consequence, it has been universally accepted that these diplomas are evidence of a thorough medical training.

If, however, the courses of instruction of the three Universities are examined, it will be found that they differ considerably from one another. These courses are laid down by the authorities of each University on the recommendation of the Faculties of Medicine. Each Faculty endeavours to obtain the curriculum which gives the greatest satisfaction. The courses can be arranged as each Faculty sees fit, subject to the control of the General Medical Council of Great Britain, which imposes certain conditions as regards courses of instruction before it recognizes the degrees as entitling to registration in the British Isles. As the authorities of the Australian Universities have ever sought the recognition of their medical degrees in the British Isles, attention has been always paid to the requirements of the General Medical Council.

A sound medical education will comprise a sufficient knowledge of the fundamental sciences of chemistry, physics and biology, upon which the specialized knowledge of the medical science is built up, a satisfactory acquaintance with the macroscopic and microscopic anatomy of the human body, with the functions of the human organism as a whole and of its various parts and systems and with the processes by which the functions of the body are controlled, a study of the various injuries and diseases to which man is subject and of the changes which these pathological conditions induce, a knowledge of the drugs and other therapeutic remedies employed to combat disease and of their effects on the human body, a wide acquaintance with the sciences and arts of medicine, surgery, gynaecology and obstetrics and some understanding of sanitary science, hygiene, preventive medicine and medical jurisprudence. The essential features of medical education will therefore be a preliminary training in chemistry, physics and biology, instruction in anatomy, physiology and biochemistry, teaching of pathology, materia medica, pharmacology and special therapeutics, training in medicine, surgery, gynaecology and obstetrics and some instruction in Public Health. No medical curriculum can be deemed

complete and satisfactory which does not provide for courses of instruction in all these subjects.

It would thus appear desirable to consider the advisability of instituting a certain uniformity in the various courses of medical instruction in Australia. This uniformity should consist in the presence of definite courses of instruction, both theoretical and practical, in each curriculum. The subjects in which uniformity should be attained should be those essential features of medical education which have been already enumerated. Uniformity should be obtained not only in the subjects, but in the main lines of instruction. Certain minimal instruction in the laboratory and in the ward should be provided for. While there are only three medical schools in Australia it should be easy to arrange for a conference of representatives of the Medical Faculties with the permission of the governing bodies of the Universities. Such a conference might consider the advantages of adopting a basis of uniformity in the curricula of the Australian Medical Schools.

EPIDEMICS OF INFLUENZA.

It would appear undoubted to any student of the progress of medical knowledge and of the advance in medical art that a knowledge of the causation of any disease and of the manner in which the ætiological agent leads to the disease is necessary for any considerable improvement in the methods of treating those affected with the ailment. It is true that a knowledge of the principal agent concerned in the production of a disease may not invariably lead to any marked change in treatment or lead to lessening in the morbidity. The discovery of the *Bacillus typhosus* has not led to the discovery of a satisfactory method of dealing with patients suffering from enteric fever. It would seem necessary that we learn how the bacillus induces pathological changes before we can interfere, so as to combat the pathogenic processes. We must not, however, forget the wonderful success of the preventive measures that can be adopted against infection with *Bacillus typhosus*, and which depend upon our knowledge of the micro-organism.

The epidemic that has been prevalent during the last few weeks in Australia, and which is known popularly as influenza, is characterized by the protean char-

acter of its manifestations. The pathology of this disease is, however, of the vaguest kind. We are not aware of a bacteriological examination of any considerable number of patients. Such an examination might serve to inform us of the nature of the infecting organism. We might also learn whether this organism dwells in the nasal passages and forms toxins which are absorbed and give rise to the symptoms of the disease, or whether the organism enters the blood and occasions a septicæmic state. It will be evident that some information on these aspects of the disease would be most useful in providing grounds for more rational treatment. It is also possible that such knowledge might serve to suggest preventive measures which could be employed to limit these epidemics, which are of low mortality, though affecting a high percentage of the population.

MANUAL COMPRESSION OF THE HEART.

It has long been known to experimental physiologists that the circulation can be restored by manual compression of the heart when the heart has become so distended with blood that the contractions of the cardiac muscle can do little more than produce a fluttering wave on the surface of the heart. If the heart be pressed with the fingers and the blood driven from the overloaded ventricles into great arteries, the cardiac contractions will often keep pace with the inflow to the heart and prevent any accumulation of blood in the chambers of the heart. From time to time an enterprising and bold practitioner of medicine has attempted to make use of this massage of the heart to restart the heart-beat.

An interesting and instructive history of such an attempt is given by Dr. Carrick Robertson,¹ who has employed massage of the heart on three occasions through an abdominal incision, the heart being pressed against the ribs by the hand below the diaphragm. A sailor came to the Auckland Hospital with an inflamed and suppurating thumb. After examination in the casualty-room the decision was formed to incise the thumb under a general anæsthetic. When the patient had been rendered anæsthetic the house surgeon made an incision. No bleeding whatever occurred from the wound, and a hurried examination showed that the man was pulseless, without any heart-beat, and that the respirations were dying away. Artificial respiration was employed, but there was no response. Dr. Robertson, who was in the vicinity, hurried to the scene of the disaster, painted the skin with tincture of iodine and made an opening through the right upper rectus region. Passing his hand into the wound he could easily grasp the heart with the fingers through the flaccid diaphragm. No movements could be detected in the heart. After a few seconds the heart was squeezed several times between the hand

¹ New Zealand Medical Journal, Vol. XVII., p. 142, August, 1918.

and the ribs. The heart gave a distinct, but feeble, response. This initial contraction was followed by slow and feeble contractions, which gave way to rapid and bounding movements. At each heart-beat the patient appeared to be lifted somewhat from the couch on which he was lying. After a little time the pulsations were less powerful, so the wound in the abdominal wall was closed and the patient placed in bed. On recovery from the influence of the anæsthetic the patient became maniacal and needed restraint. He remained in this excited state for twelve hours, and then he exhibited a childish demeanour for another twenty-four hours. In two days the patient had recovered mental control, but he had no recollection of his visit to the hospital or of any of the subsequent events. The mental changes would seem to have resulted from the anæmia of the central nervous system while the circulation of the blood was in abeyance. On the lowest estimate, the patient should be accounted dead for three minutes, while the time was possibly much greater. Not the slightest bleeding or oozing was observed in the wound. With even a flickering beat of the heart there will be a little oozing in the wound.

Although the recorded history of this case makes no mention of the nature of the general anæsthetic, the history of the case suggests chloroform. The collapse of the patient would then be attributed to vagal inhibition of the heart, consequent upon stimulation of the cardio-inhibitory centre in the *medulla oblongata*. Even if the collapse of the patient was due to syncope, a similar condition of the heart would be produced, the vagal stimulation being reflex in origin. In this condition the heart becomes acutely dilated with blood. If the heart beat be inhibited through vagal stimulation, sooner or later the heart commences to contract again. Simple vagal inhibition will not permanently arrest the circulation. If, however, the cardiac muscle cells are partially poisoned with chloroform or injured in some other way, the heart may not be able to escape from the inhibition. When the heart is emptied by forcing its contents in the great arteries, the beats of the heart will restart and the circulation of the blood will be restored.

While various mechanical conditions connected with the circulation readily lead to failure of the heart-beat and of the circulation, the heart muscle is possessed of great vitality. The nutrition of the cardiac muscle and the irritability of the muscle cells depend upon the supply of blood to the heart. This supply, which is derived from the coronary arteries taking origin from the beginning of the aorta, is regulated by the blood-pressure in the arterial system. With a falling blood-pressure less blood passes to the heart. In consequence of this diminution the cardiac muscle fibres show lessened contractility and irritability. As far as is known, the heart-beat depends on the rhythmic contractions of the muscle cells, which are initiated by chemical changes, regulated by the blood supply and by mechanical stimulation, such as tension of the heart wall. When the heart is excised from the body its beat can be restored by connecting the root of the aorta with a raised funnel containing warm blood, which has been well oxygenated. By somewhat similar procedures the hearts of children removed on the post-mortem table have been resuscitated several hours

after systemic death. It is thus not surprising to find the heart commencing its movements upon compression after a pause of a few minutes.

THE ARRANGEMENT OF MUSEUMS.

Museums are no longer regarded as housing collections of what is rare or unusual. Not only does a museum possess the uncommon, but it aims at demonstrating the association of various objects in the world of nature. Persons are asked to visit a museum and to study the contents of the cases, not only to satisfy curiosity and to pass an idle hour in reflecting on what is not usually encountered in the round of each day, but also to obtain information from a method of imparting knowledge which imprints a more permanent impression on the mind than can be gained from reading. Museums have become educative establishments open to students of all ages athirst for knowledge. The arrangement of the material in a museum is thus of much moment. The influence that will be made on the mind of the visitor will be dependent on the manner in which the exhibits are grouped and on the artistic skill which will give dramatic force to the objects possessed of central importance. The visual impression created by the collection of specimens may be increased by the use of a catalogue drawing attention to the different features of each object. In the compilation of such catalogues there is much scope for skill in utilizing the characters of the specimens to make evident the relations between the objects brought together.

A guide to the specimens and enlarged models of insects exhibited in the central hall of the British Museum of Natural History to illustrate their participation in the spread of disease, serves as a model of the use of a catalogue to enforce the lesson of a suitable collection of objects. The guide commences with an account of the large models of *Anopheles maculipennis*, the mosquito which carries the parasite. It points out the attitude of the mosquito when flying and at rest. It shows how the young forms of the malarial parasite escape into the blood with the secretion of the salivary glands, which is introduced into the wound at the time of the bite in the case of an infected mosquito capable of communicating the disease. A series of 26 models of the parasite of pernicious malarial fever, *Plasmodium falciparum*, illustrate the complete life-history of the protozoon. Some stages of this history are passed in the blood of man, others in the body of the mosquito. The descriptions of these models are of great accuracy, though stated in simple language. The attention of the visitor is next directed to models of *Culex pipiens*, an insect which does not transmit malaria, although it can make itself unpleasant. Models of the eggs and drawings of various parts of the insects are used to make evident the habits of the mosquito and its reproduction. The outstanding feature of this guide is the accuracy of the statement. No student of mosquitos and of the disease which they disseminate would pass by this collection without examining it with satisfaction. No educated person who spent some minutes regarding with curious eyes the specimens and models would fail to gather knowledge which would not likely be lost. Even the casual visitor, filling an hour by strolling

among the cases, would learn how mosquitos and malaria were related.

It is difficult to estimate the value of such an exhibit in a museum as a means for disseminating knowledge. When the specimens tell their own lesson they create an impression far beyond that produced by the emphatic assertion of authority. A wide sphere of education is open to those who are in charge of museums. Much could be done to inform the public of many matters of hygiene and public health, especially in regard to the part played by lowly animals and plants in the spread of many diseases. An object-lesson of how flies grow might serve to teach how the plagues of flies could be avoided.

WASTAGE OF FOOD.

The Americans have often been reproached with being a wasteful nation. They have indeed become rather proud of this reproach in their fancied strength in wasting what other nations must save. Inasmuch as the United States produces more food per man, though not per acre, than any European country, there has been some reason for wastage, since it costs more to save than to waste. The outbreak of the great war has appreciably altered the situation by raising the price of labour through lessening the supply. It has been necessary to withdraw labour, even from the high-priced lands of Europe. On the low-priced and fertile lands of the United States has fallen the task of feeding a large proportion of the population of the civilized world with a lessened and ever-lessening supply of labour. Well-being is no longer measured by the possession of gold or paper money, but by the quantity of flour, meat and butter controlled, since these essentials to the maintenance of life are constantly becoming less abundant in relation to gold. The Director of the Bureau of Foods and Drugs of the City of New York, Dr. Lucius P. Brown, considers that the days of plenty have gone from the United States for many years, and that it is certain that by the time they return Americans will have so practised thrift that never again will the gifts of nature be so lavishly thrown away. In dealing with the causes and remedies¹ for the wastage of food which occurs in harvesting, in manufacture, in transit and distribution and in the kitchen, in other words, after the crop has matured, he discusses a number of examples of the way in which the supply of food produced on the land can be made available to a greater number of persons. A little reflection shows that a preventable wastage of food occurs along avenues almost illimitable in number and kind. They are to be found wherever food is produced and wherever it is handled. During the year 1917 the United States produced 6,000,000,000 bushels of wheat and other cereals. It is estimated that the Allies should receive from outside sources a total of 1,000,000,000 bushels of wheat and other cereals. The estimations which have been made by officials of the United States suggest that 10% of all the crops grown in that country are wasted. It will thus be evident that the United States could supply a considerable proportion of what is needed from this source of waste alone, if it

were possible to diminish it to a figure of no importance.

Certain varieties of loss are capable of improvement promptly. It has been abundantly demonstrated that it takes one-third less in labour and in food to obtain the same quantity of milk from a highly productive than from a lowly productive cow. Again, the failure to take proper care of a food crop by spraying a orchard, the raising of poor varieties of fruits and vegetables, the selection of crops unsuitable for certain localities and soils must be rigorously prevented. Every effort should be made to ensure that food sent to market reaches its destination in a condition in which it can be consumed. Dr. Brown gives an interesting account of the way in which eggs are collected for the market in the United States, and shows how the annual loss amounts to 20 eggs for every man woman and child in the United States. Reviewing, step by step, the passage of the eggs from the farm to the consumer, he points out how the desire to obtain a higher price rather than the wish to ensure that every egg reaches the consumer has been the governing factor in the situation. He mentions the steps that the Food Administration are taking to ensure that the supply of eggs rather than their price should be the dominating factor. Much attention is given to the methods of packing food in cars for railway carriage. He describes the folly of leaving the loading of waggons to those who have not received sufficient instruction as to the manner in which the waggons are to be packed. By means of figures and drawings he illustrates the immense saving in haulage, not to mention the diminution in loss by avoidance of crushing, which can be accomplished by suitable packing.

One of the most valuable suggestions of Dr. Brown is the utilization of the ground alongside railways for the wholesalers' stores, in which goods can be loaded direct from the railway waggons and from which the goods can be taken direct to the retailers. Apparently, a few of the railways in the United States have already made a beginning in this most important principle of town planning. Steps are being taken to extend, as far as possible, in the United States this economical system of dealing with the distribution of produce. It would, indeed, be well if we in Australia could make use of this innovation. The high cost of cartage is one of the most potent factors in the soaring cost of living. If it were possible to eliminate even a fraction of the cost of cartage by placing the stores of commission agents along the lines of railways, so that goods could be unloaded directly into the stores, a considerable diminution of cost would result.

The largest waste of all appears to occur in the utilization of food in a kitchen, whether this be in a private house or in a restaurant. The thorough examination which has been made by the Bureau of Food in the City of New York of the garbage tins of the city has led to the discovery that the average value of the contents of a load of garbage amounted to ten pounds sterling, the minimal figure being two pounds and the maximal thirteen pounds. The recognition of the need of economy to make available more food for distribution to Europe and to diminish personal expenditure, has resulted in a diminution in the

¹ *Journ. of the Franklin Institute*, Vol. 185, No. 5, p. 585.

amount of garbage to a surprising extent. In some instances the value of the garbage has fallen to one-third of its previous value. One special instance may be mentioned. The examination of the garbage showed that the waste of bread in the City of New York for a year amounted to 60,000,000 pounds, equivalent to 1,000,000 bushels of wheat. If bread were wasted throughout the whole of the United States at the same rate this would be equivalent to a waste of 20,000,000 bushels of wheat per annum. The Food Administration of the United States points out that this waste of bread must be prevented, since the wheat it represents will form a considerable proportion in the 90,000,000 bushels of wheat which the Administration desires to send to the Allies during the year.

Naval and Military.

CASUALTIES.

We regret to learn from the 429th list of casualties that Captain John Shaw Mackay, M.C., 7th Field Ambulance, who was previously recorded ill, is wounded.

HONOURS. Amendment.

Referring to an extract from the *London Gazette* of January 7, 1918, which was republished in *Commonwealth Gazette*, No. 76, of 1918, and which appeared in *The Medical Journal of Australia* of January 19, 1918, the following statement appears in the *Commonwealth Gazette* of August 30, 1918:—

The Most Excellent Order of the British Empire.

To be Officers of the said Most Excellent Order.—For "Lieutenant-Colonel William Thornborough Hayward, C.M.G., Commanding No. 1 Australian Auxiliary Hospital," substitute "Lieutenant-Colonel Edwyn Walton Hayward, Commissioner, Australian Red Cross Society."

APPOINTMENTS.

The following notices dealing with appointments, promotions, etc., have appeared in the *Commonwealth of Australia Gazette*, No. 145, of September 12, 1918:—

Australian Imperial Force. Army Medical Corps.

To be Major—

Honorary Captain J. W. Flood, Australian Army Medical Corps Reserve. Dated 13th May, 1918.

Australian Military Forces.

Temporary Appointment and Grant of Temporary Rank.
Honorary Major R. B. Wade, Australian Army Medical Corps Reserve, being Consulting Orthopaedic Specialist at Head-Quarters, and being granted the temporary rank of Lieutenant-Colonel and pay at the rate of £685 per annum, inclusive of all allowances except travelling whilst holding the appointment. Dated 8th August, 1918.

Public Health.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the week ending September 7, 1918:—

	Metropolitan Combined District.	Hunter River Combined District.	Rest of State.	Total.
	Cs. Dths.	Cs. Dths.	Cs. Dths.	Cs. Dths.
Enteric Fever ..	3 0 .. 0 0 ..	4 0 .. 7 0		
Scarlatina ..	17 0 .. 0 0 ..	9 0 .. 26 0		
Diphtheria ..	40 3 .. 5 0 ..	50 1 .. 95 4		
*Pul. Tuberculosis	14 0 .. 0 0 ..	17 1 .. 31 1		

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the fortnight ending September 8, 1918:—

	Metropolitan. Cs. Dths.	Rest of State. Cs. Dths.	Total. Cs. Dths.
Enteric Fever..	0 0 .. 2 0 ..	2 0	
Scarlatina ..	78 2 .. 63 1 ..	141 3	
Diphtheria..	153 5 .. 139 1 ..	292 6	
Pulmonary Tuberculosis	37 12 .. 21 6 ..	58 18	
C'bro-Spinal Meningitis	1 .. 1 ..	2 ..	
Poliomyelitis ..	2 .. 1 ..	3 ..	
Puerperal Fever ..	2 .. 1 ..	3 ..	

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the week ending August 31, 1918:—

	Adelaide. Cs. Dths.	Rest of State. Cs. Dths.	Total. Cs. Dths.
Scarlatina ..	2 1 .. 16 0 ..	18 1	
Diphtheria..	2 0 .. 23 0 ..	25 0	
Pulmonary Tuberculosis	2 0 .. 7 2 ..	9 2	
C'bro-Spinal Meningitis	0 0 .. 2 0 ..	2 0	
Erysipelas ..	1 1 .. 1 1 ..	2 2	
Morbili ..	0 0 .. 1 0 ..	1 0	
Pertussis ..	1 0 .. 14 0 ..	15 0	
Puerperal Fever ..	0 0 .. 1 0 ..	1 0	

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the fortnight ending August 31, 1918:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Enteric Fever..	6 .. 8 ..	14	
Scarlatina ..	66 .. 16 ..	82	
Diphtheria..	69 .. 40 ..	109	
Pulmonary Tuberculosis	35 .. 13 ..	48	
Cerebro-Spinal Meningitis	1 .. 0 ..	1	
Poliomyelitis ..	2 .. 0 ..	2	
Erysipelas ..	10 .. 2 ..	12	

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the fortnight ending September 7, 1918:—

Disease.	Cases.
Enteric Fever..	4
Scarlatina ..	11
Diphtheria..	102
Pulmonary Tuberculosis	20
Erysipelas ..	5
Anchylostomiasis	1
Poliomyelitis ..	1

NEW ZEALAND.

The following notifications have been received by the Chief Health Officer, Department of Public Health, Hospitals and Charitable Aid, New Zealand, for the four weeks ending August 19, 1918:—

Diseases.	No. of Cases.
Scarlatina ..	158
Diphtheria..	612
Enteric Fever..	17
Pulmonary Tuberculosis	88
Cerebro-Spinal Meningitis	12
Puerperal Fever ..	11
Erysipelas ..	11
Hydatids ..	8
Ophthalmia Neonatorum	1

Abstracts from Current Medical Literature.

THERAPEUTICS.

(93) Treatment of Yaws.

L. W. Guérero, E. Domingo and M. Arguëlles have tested the treatment of frambesia by means of antimony, as proposed by Castellani (*Philippine Journ. of Science*, July, 1918). The mixture proposed by Castellani contains tartar emetic, sodium salicylate, potassium iodide and sodium bicarbonate. It is given well diluted with water thrice daily. The authors have employed this treatment on 43 cases of frambesia. The patients showed symptoms of general malaise, weakness, fever, nausea, vomiting, intense coryza, congestion of the conjunctiva, caphalalgia and insomnia. One patient also showed slight induration and nodule formation of the skin of the face and ears, while another patient presented erythematous patches on different parts of the body. The number of doses necessary to effect a cure varied from 15 to 80, the time elapsing from the commencing of the treatment to a complete recovery being from five to 27 days. Of the 43 patients, 29 showed recovery, seven showed improvement of symptoms and seven showed no improvement at all. In most cases the improvement occurs with great rapidity, resembling the improvement after injections of salvarsan. In six or seven days of treatment the granuloma takes on a livid appearance, becomes surrounded by a pink halo and commences to flatten. The crust dries and disappears, leaving a macule that eventually is lost. In deep and extensive ulcers healing takes place concentrically, the whole process lasting from 15 to 30 days. The authors ascribe incomplete recovery and relapses to incomplete medication, due to suspension of the treatment before the destruction of *Spirochaeta pertenue*. The authors are satisfied from this trial that treatment with antimony offers a practicable means of combating this disease, which is widely distributed throughout the Philippine Islands.

(94) The Toxicity of Copper.

H. L. Huber has made some observations on the toxic properties of copper sulphate and some copper compounds of pure amino-acids, the experiments being carried out upon guinea-pigs (*Journ. of Pharmacol. and Exper. Therapeutics*, May, 1918). The investigation falls into two parts, one dealing with the acute toxic properties and the other with the chronic toxic properties of these substances. The authors found that the subcutaneous injection of the various preparations of copper in doses of 16 mg. copper per kilo. body weight led to death in from three to sixteen hours. The animals showed marked irritation and restlessness, despite spasmodic contractions of the hind legs and occasional paralysis of the hind limbs before death. At autopsy there was slight oedema at the place in injection, hyperæmia of the gastro-intestinal wall, which exhibited petechial hæmorrhages, and hæmor-

rhages on the peritoneal of the intestinal. No differences have been observed between the toxic effects of copper sulphate and of the compounds of copper with the amino-acids. The authors have endeavoured to produce experimental chronic intoxication with copper. The production of a typical chronic intoxication with copper has been disputed for many years. The authors have given a number of guinea-pigs a series of subcutaneous injections of copper salts lasting over 102 days. At the time of death the guinea-pigs were fat and showed no ulcerations at the points of injection. The autopsy showed no pathological changes. A series of chemical examinations showed definite measurable quantities of copper in the spleen, heart, lungs, kidneys and liver. The weights of the guinea-pigs at the end of the experiment were roughly 50% higher than at the commencement of the injections. Another attempt to produce symptoms of chronic poisoning has been made by intra-muscular injection. Although definite, estimable amounts of copper could be introduced into the tissues in this way, no pathological changes could be discovered in the organs and no recognizable interference of health of the animals could be detected. A third series of experiments with the same object has been made by feeding guinea-pigs with copper salts along with their daily ration. Copper has accumulated in the tissues, its distribution and amount being practically the same as when the copper is given by other paths. The histological picture of the tissues where copper is deposited fails to show any changes which can be attributed to the copper.

(95) Detection and Estimation of Quinine.

W. Ramsden and I. J. Lipkin have made an examination of the methods for detecting and estimating quinine in animal material, at the request of the Medical Research Committee (*Annals of Trop. Med. and Parasit.*, May, 1918). They find that, by suitable precautions, the thalleloquin test and the herapath test can be rendered very delicate means for detecting quinine. In the thalleloquin test the amount of bromine water used must be proportional to the amount of quinine, an appreciable interval of time must elapse before the addition of ammonia and a suitable method used for detecting fluorescence. The turbidity yielded by Tanret's reagent can be employed as an exceedingly delicate "negative" test for quinine. With proper precautions, this test can be used for the detection of quinine. The authors describe a suitable process for decolorizing urine and for removing substances which yield emulsions with ether. This process also removes these substances other than quinine which yield clouds with Tanret's reagent. The method depends upon the precipitation of the urine with a solution of lead acetate and later with ammonium sulphate. The authors have found that commercial ether cannot be used for the extraction of quinine, either for qualitative or quantitative purposes. It is necessary to purify the ether by

shaking it thoroughly for five minutes with four successive quantities of a saturated aqueous solution of sodium bisulphite. The ether is washed with a small amount of half-saturated salt solution and subsequently with water. The separated ether is purified by distillation. The authors find that the volumetric estimation of quinine, according to the method of Gordin, is reliable. In this process the quinine is dissolved in a measured volume of standard sulphuric acid, and the solution is precipitated by the addition of excess of Wagner's reagent. The precipitate is filtered off and an aliquot part of the filtrate is decolorized by the addition of sodium thio-sulphate solution and titrated with standard sodium hydroxide. Methyl orange is employed as the indicator. The authors describe a new process whereby quinine can be isolated from urine in such a state of purity that estimations can be immediately made by the titration method of Gordin. The authors have also carried out some observations upon nephelometric methods for estimating the quantity of quinine. They have employed these methods for determining the quantity of quinine in the blood and in the urine. The original paper must be studied for details of these methods.

(96) General Anæsthesia by Oral Administration.

J. T. Gwathmey and H. T. Karsner have issued a report, based upon experiments with animals and a sufficient number of clinical cases, which serves to show that general analgesia, in which there is loss of sensation with or without loss of consciousness, can be established for painful dressings and for short operations by the oral administration of the anæsthetic (*Journ. Amer. Med. Association*, April 6, 1918). They point out the utility of such a mode of giving an anæsthetic in military practice, and they consider that there is also a definite sphere of usefulness in civil surgery. In wounds involving fracture of bones the dressings are often painful, so that it has been usual to employ general anæsthesia to ensure that the patient remains quiet without displacing the fragments. General analgesia produced by a draught without removing the patient from bed appears to the authors the logical solution of the problem. The preliminary experiments were made on rabbits. The anæsthetic was given by a stomach tube. A series of rabbits of approximately similar weights were given increasing amounts of each substance tested. Quinine and urea hydrochloride, morphine tartrate, trional and paraldehyde were found either useless or of too great toxicity. Solutions of ether in olive oil soon produced a diminution of reflex excitability, passing into a stage of complete analgesia, from which the animal recovered in minutes or hours according to the dose. The addition of morphine or paraldehyde to the solutions did not improve the anæsthesia or prolong it. In consequence of these results combinations of ether and liquid paraffin were tested clinically.

The strength of the mixtures in ether was approximately 50%, and a few drops of peppermint water were added as a flavouring agent. The authors record the results of 13 cases. A soldier, aged 36 years, had a compound comminuted fracture of the femur. The dressings could only be done under general inhalation anaesthesia. After four fluid drachms (14 mills) of the mixture the patient fell into light sleep. The wound was dressed, the splint removed and irrigation practised without pain. The patient awoke and talked during the dressing of the wound. There was no nausea, and the pulse and respiration were not increased. The dressing was repeated four times in the same way without pain or change in the pulse-rate. In some of the other patients the anaesthesia was deeper, the patient being almost unconscious during the dressing and for 30 minutes afterwards. In one case no analgesia was induced. The authors state that the method is now extensively used in a casualty clearing station, and that more extensive operations are being performed. They cite the history of a case in which the knee-joint was incised and fragments of a comminuted patella removed.

UROLOGY.

(97) Vesical Symptoms in Renal Disease.

D. W. MacKenzie points out that frequent and painful urination, hæmaturia or pyuria may be the only subjective signs of renal disease (*The Canadian Med. Assoc. Journ.*, July, 1918). In renal tuberculosis it is not infrequent for these symptoms to be present, although the disease is far advanced when vesical symptoms are marked. The vesical symptoms are not so evident in pyonephrosis as in renal tuberculosis. General infection of the kidney, however, may be manifested by purulent urine, while the mucosa of the bladder is but little involved. The majority of the patients complain of frequent micturition or pyuria. Practically every case of pyelitis is accompanied by some cystitis, although not every case of cystitis is accompanied by pyelitis. The author is convinced that the majority of cases of cystitis are the result of renal infections. Since nearly every patient suffering from nephrolithiasis give a history of frequent urination with pyuria, it is not uncommon for the condition to be treated as a cystitis. Urologists now recognize that the so-called classical symptoms of renal calculus, i.e., hæmaturia, renal colic and renal pain are very often absent. The author points out that vesical symptoms may also predominate in cases of ureteral calculus. Under these circumstances he pleads for a very careful examination in all cases of septic cystitis, with a view to the exclusion of a renal infection. He details the means usually adopted by him for the purpose of arriving at a correct diagnosis in these cases.

(98) Advanced Hypertrophy of the Prostate.

F. S. Crockett draws from his experience to show that even the most desperate cases of urinary retention from enlargement of the prostate gland can be rendered amenable to surgical treatment (*Urolog. and Cutan. Review*, June, 1918). He deliberately confines his remarks to what he terms "bad surgical risks." When a patient whose condition has been allowed to become desperate, either because of a fear of the operation or from any other reason, comes under treatment, it is necessary to apply first aid before the condition can be safely treated. The first essential is a competent nurse, who will stay with the patient for the first 24 to 48 hours. In the next place, the bladder must never be emptied suddenly. The author draws off at hourly or two-hourly intervals quantities such as 60 to 120 c.cm. At the same time, the patient is given as much water as he will take to cover the water loss. He holds that if the bladder be emptied and the loss be not made good, a congestion of the vessels in the bladder and in the kidney results, and the patient may die of uræmia. After a time the bladder can be emptied completely without risk. At the same time, active catharsis should be induced, and any pyorrhæa, root abscesses or other dental defects which may endanger the patient's condition, should be attended to. While these preliminary measures are being carried out, the renal function is estimated by the application of the dye tests, the measurement of the urea excreted and by the more common urinary tests. When these preliminaries are attended to, the patient, even if he be a very old man, may be subjected to a two-stage prostatectomy without undue risk.

(99) Pyuria.

Virgil E. Simpson records two cases of pyuria, in which the diagnosis was specially difficult (*Urolog. and Cutan. Review*, May, 1918). The first patient was a man, aged 30 years, who had had attacks of abdominal pain at irregular intervals for seven years. Six years before disease of the gall-bladder had been diagnosed, and an operation performed. Some adhesions were found and dealt with, and the appendix, which was diseased, was removed. The pain persisted. In August, 1917, he had an attack characterized by intense pain, and situated on the right side of the abdomen. It was not paroxysmal, and did not radiate in any particular direction. Nothing abnormal was detected by X-ray examination. An unsuccessful attempt was made to pass a catheter into the renal pelvis. In January, 1918, the author saw him again, and sent him to a colleague for ureteral catheterization. The catheter passed without difficulty, and it was found that the pelvis of the right kidney was somewhat dilated, and that the kidney itself was slightly enlarged. At that time the kidney was palpable. Nothing abnormal was detected in the urine. Movable kidney was diagnosed, and the organ was sutured to the abdominal wall and

to the muscles of the back. A week later he complained of intense pain in the right side, following an alleged injury sustained by the slipping of his head-rest. During the following few days there was marked pyrexia, considerable leucocytosis and an abundance of pus in the urine. The author considered at the time of the operation whether the kidney was sufficiently diseased to necessitate its removal. The subsequent history revealed that the determination to save the kidney may have been an unwise one. The author is now prepared to remove it, if improvement does not follow the administration of an autogenous vaccine. The unusual feature in this case was that the passage of the catheter into the pelvis did not result in the liberation of a large quantity of urine. The catheter was passed without difficulty when the patient was placed in the inverted position. The second patient was a young woman, who had lost a great deal of weight. She had a persistent cough and some fever. No signs indicating a tubercular infection could be discovered, and the von Pirquet test was negative. A Wassermann test was performed, and yielded a positive response. She was treated by intra-muscular injections of salicylate of mercury in increasing doses. Shortly after, she became seriously ill with uncontrollable nausea, vomiting and fever. The urine contained a large quantity of pus and colon bacilli. Notwithstanding her desperate condition, she responded promptly to an autogenous vaccine, and regained practically normal health.

(100) Bilateral Renal Tuberculosis.

J. H. Cunningham assumes that the clinical diagnosis of bilateral renal tuberculosis not infrequently fails (*Urolog. and Cutan. Review*, June, 1918). The post-mortem evidence reveals that from 45% to 60% of cases of renal tuberculosis are bilateral, while, according to the clinical diagnosis, the frequency is from 8% to 25%. The diagnosis of the condition must depend on cystoscopy, ureteral catheterization and inoculation of guinea-pigs with the sediment from the segregated urine. The author is inclined to the belief that surgical treatment of bilateral renal tuberculosis is rarely justifiable, and should only be resorted to when the tubercular process on one side is extensive and causes local suffering, while the process in the other kidney does not give rise to subjective symptoms and the functional tests reveal a high value of secretory power of the second organ. His experience has taught him that tuberculin, combined with the ordinary hygienic treatment, frequently reduces suffering and prolongs life. This treatment, however, is of small account when the bladder is infected secondarily. In some cases tuberculin is of little or no benefit, in others it is of unquestionable value, and rarely it effects a complete cure. In two of his cases this result was obtained, and he has no hesitation in ascribing it in a large measure to the tuberculin. He appends the clinical histories.

British Medical Association News.

SCIENTIFIC.

A meeting of the South Australian Branch of the British Medical Association was held at the House of the Branch, Hindmarsh Square, Adelaide, on July 25, 1918, Dr. J. C. Verco, the President, in the chair.

Dr. H. Gilbert reported the history of a case of thrombosis of the mesenteric vessels. The text of his paper appears in this issue, upon page 243.

Dr. T. Steele Scott gave an account of another case of thrombosis of the mesenteric vessels, the report of which appears upon page 243 of this issue.

Dr. R. H. Marten thought that they were all deeply indebted to Drs. Scott and Gilbert for their extremely interesting papers on a subject which they must all admit was little understood in the profession. Every few months they heard of some poor woman having an attack of so-called appendicitis coming on a few days after delivery, and, from what they could gather, these cases were almost invariably fatal, in spite of the best surgical treatment. Only last week he had heard of a lady dying of appendicitis, which came on nine days after having given birth to twins. She was operated upon, but, unfortunately, with a fatal termination, and he was beginning to think that these so-called cases of appendicitis were in reality a thrombosis of the appendicular branches of the ileo-colic artery, derived, as they knew, from the superior mesenteric artery.

They were all aware that women, during the puerperium, were very liable to thrombosis of the vessels and lymphatics of the lower limb, giving rise to the well-known condition of "white leg." The blood after delivery was supposed to be in such a condition as to more easily lead to a thrombosis in the vessels which passed through the pelvis, and had probably been subjected to a certain amount of traumatism from the pressure of the foetus. If the vessels of the lower limb could be thus affected, it was quite easy to understand that the neighbouring ileo-colic vessels could be attacked in the same way; and as the appendicular artery is a terminal artery, never, except pathologically, anastomosing with any other vessels, its thrombosis would at once lead on to a gangrenous appendix. Further, if the ileo-colic artery were involved in the clotting, there would be nothing to save the caecum and part of the ascending colon from passing into the same condition.

In a way Dr. Marten had been both fortunate and unfortunate in seeing in consultation both the cases about which the papers had been read. Dr. Scott's patient had had pain in the right iliac region, accompanied by vomiting, diarrhoea and distension, coming on some days after giving birth to a child, but there had been no rigidity either anteriorly or posteriorly, and no loss of abdominal movement. He had not been able to satisfy himself the first time he saw her that it was a case of appendicitis, and he had been unable to make a diagnosis. Perhaps some of them thought that he had been wrong in suggesting that he should wait and watch the symptoms when others would have advocated an immediate exploration. Anyway, some hours afterwards, when both the late Dr. Todd and he saw her with Dr. Scott, they had thought an exploration advisable, as neither of them could make a diagnosis. It remained to the great credit of Dr. Scott that he had suggested that they might find a thrombosed vessel, which the operation had revealed. From the appearance of the caecal region, it was probable that the whole of the ileo-colic artery had been affected. After this experience he had thought that, if he ever saw a similar case, he would be able to recognize it at once, but a few months afterwards, when he had been asked by Dr. Gilbert to see a lady who had been confined with her first child some days before, and who had symptoms of trouble in her right iliac fossa, he had been unable to make a correct diagnosis, although he had thought that the patient should be explored. This had revealed the condition described by Dr. Gilbert. If he was not wearying them, Dr. Marten would like to make a few remarks on a case which he thought was one of the most brilliant of the many diagnoses he had known their President to make. No doubt he remembered the case. The speaker would never forget it.

A young policeman whom Dr. Marten was attending for secondary syphilis had been taken suddenly and dangerously

ill early one morning, with all the symptoms of an acute abdominal affection. As he had been otherwise engaged, Dr. J. C. Verco had kindly gone to see the patient for him. Dr. Verco had then telephoned to say that, although the patient had symptoms of an acute abdominal condition, which might possibly be a volvulus, he considered there was no doubt that the symptoms were really due to a thrombosis of the superior mesenteric branch of the abdominal aorta. This had seemed to Dr. Marten what might be called a very "tall diagnosis," but they had removed the man to a private hospital and explored his abdomen a few hours after the onset. Dr. Verco's diagnosis had proved correct. The man had died one of the most tragic deaths it had been the lot of Dr. Marten to see. The patient had been absolutely conscious to the last breath, fully knowing for days that he had to die. There had been no hope, in those days, of doing anything to relieve him.

If he had a similar case nowadays he would be inclined to open the superior mesenteric artery, attempt to remove the clot and close the vessel by an arterial suture, at the same time giving him a huge injection of one of the many anti-syphilitic remedies, which are now so successful, into his veins.

It seemed to him extremely difficult to make a correct diagnosis in these cases. There might be diarrhoea, either the ordinary contents of the bowel or a bloody diarrhoea; or, again, there might be complete obstruction. There might be vomiting, either of the contents of the stomach, or, as some authors stated, of "lumps of bloody vomit." This latter he had never seen. In the early stages he thought there was no rigidity of the anterior or posterior abdominal muscles, although this might come on later, when peritonitis was developing. In the cases he had seen there was no loss of abdominal movements. An extreme collapse, with pain in the abdomen, was frequent, and he thought that if these symptoms were present in a case in which there was a liability to the occurrence of an embolus, such as in a case of a valvular lesion, the possibility of arterial thrombosis should be foreseen. For example, it should be remembered that the thrombosis found in a puerperal woman or a man suffering from syphilis might prove to be a thrombosis of a mesenteric vessel.

He quite agreed with those authorities who say that the diagnosis was rarely ever arrived at before an exploration was undertaken. Thrombosis of the mesenteric vessels was said to be more common in men than in women, but the reverse was his experience. Removal of a large portion of the caecum and ascending colon had been undertaken, but with almost invariably fatal result, and he thought, if the case were seen early enough, arteriotomy and removal of the clot might be of more use, if the complete removal of the thrombus were possible.

Dr. J. A. G. Hamilton felt sure that he voiced the feeling of the meeting when he complimented Drs. Scott and Gilbert on the value of their papers on this extremely rare, obscure and fatal disease. He had only seen one case of mesenteric thrombosis, some four years ago, and he regretted that he failed to recognize the condition, and wasted valuable time in waiting for developments. The thrombosis followed a supra-vaginal amputation of the uterus for fibro-myoma. The patient made satisfactory progress for five days. On the sixth day she was suddenly seized with internal abdominal pain, at first colicky in character, later becoming almost unrelenting. He thought it was a case of paresis of the bowel, probably from ileus or a band of adhesions, and he ordered 0.5 mil of pituitrin to be repeated every four hours. On the next day the pain was still severe, with a distended, rigid and tender abdomen. The patient had vomited a few times; on the third day her general condition was poor in the extreme, with constant vomiting. The pulse was 134, the temperature sub-normal, abdominal distension had increased, there had been no action of bowel, and no flatus had passed, despite repeated enemata and frequent doses of pituitrin. Thinking it was a case of intestinal obstruction from some cause, he did an exploratory laparotomy. On opening the abdomen, a quantity of blood-stained fluid escaped. A coil of small intestine was found semi-gangrenous. The mesentery was deeply congested and thickened by blood clot. Clamps were applied well above and below the diseased part, and the gangrenous bowel was resected. The two cut ends of the bowel were then brought out from the wound, stitched to the parietal wound, and a Paul's tube placed in each end. A careful examination of the intestine showed no evidence

of the presence of mechanical constriction or of valvulus to account of the gangrenous bowel. The patient's condition was extremely grave at the time of operation, and she died the same evening. He admitted that, even after the exploration, he failed to find the cause of the trouble. He had never met with a similar case.

On looking up abdominal lesions in Keen's *Surgery*, he had found an excellent description of mesenteric thrombosis, which completely covered the conditions found in his case. Keen asserted that mesenteric thrombosis was not common after operation, and was rarely amenable to surgical treatment. Keen considered, as Dr. Gilbert had stated in his paper, that there were two forms of mesenteric thrombosis, arterial and venous. Arterial thrombosis was the more common of the two. Any condition which might lead to a thrombus in other vessels, might be a factor in the causation of thrombosis of the mesenteric arteries and veins. Arterio-sclerosis, endocarditis and atheroma were the most common causes of arterial thrombosis, while venous thrombosis might be primary or secondary to thrombosis of the portal vein, or might be caused by syphilitic thrombosis of the mesenteric veins, or phlebitis of the lower extremity. Moynihan, in discussing the questions of occlusion of the vessels of the mesentery by pathological processes, said that it was a remarkable fact, but none the less true, that the collateral circulation was very rarely established in occlusions of the mesenteric arteries. The anastomosing vessels were of small size, and only carried blood in the smallest quantity to the impoverished area. The result was that this area became by slow degrees overloaded with blood, which could not escape, and an hæmorrhagic infarction was established. As soon as the blood supply of the intestine was interfered with, the wall of the bowel became readily and rapidly invaded by micro-organisms, the condition ending in gangrene. Moynihan said that there might be diarrhoea or constipation. If the former, the motions were frequent and blood-stained; if the latter, obstruction was absolute, neither flatus nor feces being passed, but, in both, the abdomen became distended, rigid and tender.

Most authorities considered that the most common causes of mesenteric thrombosis included infections of the intestinal tract, such as ruptured appendix, enteric fever, general sepsis, as of septicæmia and puerperal fever. None of the authorities that he had been able to consult mentioned it as a sequence of parturition. As both Dr. Scott's and Dr. Gilbert's cases followed labour, and in neither case was there any evidence of sepsis or old-standing circulatory trouble, it was reasonable to suppose the mesenteric thrombosis in each case was caused by a thrombus of the uterine or ovarian vessels, which was a by no means uncommon sequence of child-birth.

As regards treatment, the statistics were not encouraging, the disease having proved fatal in from 92% to 94% of recorded cases. Possibly this was due to the fact that a diagnosis was not made nor the abdomen opened until the patient was profoundly toxic and in a state of collapse. As the mortality of the disease was so high, immediate operation should be resorted to as soon as the diagnosis was made. Complete resection of the gangrenous bowel should be done. The patient was not generally in a condition to bear a prolonged operation by immediate anastomosis. In cases where resection of gangrenous bowel was necessary for other causes, such as ileus, acute intestinal obstruction from bands or internal hernias, he had found it safer, after resecting the portion of gangrenous bowel, to fix the open ends to the wound with a Paul's tube in each end, and then do an anastomosis later on. By this means the patient was allowed to get over the intense collapse caused by the peritonitis, by intestinal obstruction and by the profound toxic poisoning. No doubt they had all missed cases of mesenteric thrombosis in their practice, mistaking the symptoms for some other abdominal lesions, but, after listening to the papers read that night, and the interesting discussions, they might in the future be on the alert for the symptoms of this disease, and by early operations they might hope to lower the present high mortality.

One important lesson to be gained from these cases was that the "wait and see" policy was essentially bad when they saw a patient with "an acute abdomen" and could make no definite diagnosis. There should be no delay in making an exploratory laparotomy. It was only in this way they could

hope for better results, no matter what the cause of the "acute abdomen" might be. As thrombosis of the mesenteric vessels devitalized a coil of intestine, a complete removal of the coil of bowel involved seemed to be the only treatment of any value.

Dr. W. A. Verco said that the thrombus generally occurred in the superior mesenteric artery, the proportion being five in the artery to one in the vein. It also happened more often in the superior mesenteric artery than in the inferior mesenteric artery, the proportion being as forty to one. The parts supplied by the superior mesenteric artery and its branches were the jejunum and small intestine, appendix, ascending colon, transverse colon and the upper part of the descending colon. The onset of the trouble was generally accompanied by severe pain, constant and with exacerbations, tenderness, vomiting, the vomit containing blood-stained fluid if the upper part of the bowel is involved, diarrhoea in the early stages of the trouble, distension and stasis in the later stages from paralysis of the bowel. The passage of blood-stained fluid occurred in the motions in 42% of the cases. A quick pulse was present. Ninety-four per cent. of the cases proved fatal. Some of the cases that had recovered, had established a collateral circulation through the intercostal vessels, through some small renal vessels and vessels of the suprarenal capsules. The troubles for which it was most likely to be mistaken, were appendicitis, intestinal obstruction and intussusception. The treatment should be an early operation. In doing the operation the better plan was to bring all the doubtful bowel out of the abdomen and to pack gauze around it. An opening was made into it and a Paul's tube put in it. It was better not to attempt a big resection of intestine at this stage, because (1) of the shock and length of time it would take to deal with the mesentery, and (2) because they did not know exactly how much bowel should be removed. It would better to wait until the line of demarcation was well established. Then an enterectomy could be done and a union made.

Medical Societies.

THE OPHTHALMOLOGICAL SOCIETY OF NEW SOUTH WALES.

The annual general meeting of the Ophthalmological Society of New South Wales was held in the Sydney Hospital on August 7, 1918, at 8.15 p.m., Dr. E. A. D'Ombain, the President, in the chair. Present: Dr. R. H. Jones, Dr. J. J. Kelly, Dr. J. C. Halliday, Dr. Cyril Shepherd and Dr. Guy Antill Pockley.

The minutes of the last general meeting were read and confirmed. The Honorary Secretary presented and read his report for the past year. The Honorary Treasurer also presented the financial statement for the year. The reports were received.

Election of Officers.

The President declared the following officers duly elected for the ensuing year, no other nominations having been received:—

President: Dr. R. H. Jones.

Vice-President: Dr. E. A. Brearley.

Honorary Secretary: Dr. J. J. Kelly.

Honorary Treasurer: Dr. J. C. Halliday.

Members of Council: Dr. Guy Antill Pockley and Dr. E. A. D'Ombain.

Presidential Address.

Dr. E. A. D'Ombain, prior to vacating the chair, read his presidential address, as follows:—

"Gentlemen,—Following our custom, it is my honour to address a few remarks to you as retiring President of our Society.

"Long ago I had made up my mind to contribute my views, founded on some years of experience, on the subject of that well-known condition of the eyes called phlyctenular conjunctivitis. Unfortunately for my intention, the ground was taken from under my feet by two good articles in the April number of *The Ophthalmoscope*, 1918, by a Bernard Crid-

land, and my one time co-worker, Beaston Hird. It was the latter who, some eleven years ago, convinced me of the real origin of the lesion, found mainly at the junction of the cornea and sclerotic, under the conjunctiva, to which has been given the name of 'phlycten.'

"With such excellent literature at hand, it would seem superfluous for me to attempt to add anything to what the authors referred to have stated in their articles in *The Ophthalmoscope*, and so I propose to only add my own small quota to the sum total of their remarks, and incidentally to contrast or compare my ideas with theirs.

"Firstly, then, Cridland suggests some criticism about the nomenclature of this condition, and admits that the term 'eczematous kerato-conjunctivitis' is open to question as a proper designation of the disease. This title, I beg leave to say, I am not in favour of, and although Cridland states that Sydney Stephenson found 63% of one series of his cases, 765 in number, suffering from eczema, I myself have never seen in Sydney any cases accompanied by this disorder. Nor can I agree that the term 'scrofulous,' excellent though it be to denote a state of tubercular taint, can, in its derivational sense, be applied in Australia at any rate; for the cases that have come under my notice, both in hospital and private practice, had not the most remote resemblance to 'a little pig,' the meaning of the word 'scrofula.' However, in the denser packed areas of the cities of the old world may be found the reason for this appearance of the patients. At the same time, one must agree that the term scrofulous, having reference in our minds (or in the minds of those who, like myself, graduated twenty years ago) to that condition, which later became to be associated with a tubercular taint, must, in the light of our more recent methods of investigation, be acknowledged as a most suitable term. Personally, I always call the condition a phlycten or phlyctenule, chiefly from old habit.

"One point I wish to make before going any further, and that is, I am quite convinced in my own mind that all these cases of so-called phlyctenular disease are due to infection in some part of the body of the *bacillus tuberculosis*.

"I make this statement in view of the fact that in every case but one a markedly positive von Pirquet test has been demonstrated.

"I am not going to attempt to describe the condition, as its site and appearance are familiar enough to all oculists, but were I addressing our confrères in general practice, I should point out to them the main characteristics, if need be, in order to draw their attention to the importance and significance of these apparently trivial looking conditions—for in many of our cases they appear as such—and thus place them in the position of being able to treat effectually the underlying cause, and incidentally saving, not only an eye from impaired vision, but perhaps a life from early disaster. I would like to say a few words about the type or class of patient in which I have found the condition. Cridland states that 'practically all our patients are of the poor class.' Perhaps there is an absence of the poor class in Australia, as it is known in the cities and towns of the northern hemisphere, but, however that may be, some of my patients have come from the families of the well-to-do.

"I well remember one striking instance of the latter type. The patient was a particularly healthy, rosy-cheeked little girl of six years—an only child of healthy parents. They were very sceptical of my diagnosis of the origin of their child's 'sore eye.' Von Pirquet test soon satisfied them, and their daughter, under the proper attention, very soon showed them that she could acquire a great deal better health than they were quite satisfied with. In all probability this child might have developed a marked decline in health later, if the condition were left undetected.

"This leads me to speak of the age of the patients. Undoubtedly the greatest number of cases are found amongst children; but by no means all of them, and some of my cases have been up to 35 years of age. One of this age was under treatment for many months for tubercular tubes and ovaries. Another was being treated for tubercular cervical glands. Undoubtedly the lesion, curiously enough, appears to be more frequent in females, though why this should be so is hard to explain.

"Now, as to the co-existence of other conditions than tubercular, to my mind the chief amongst these is adenoids in

the young patients, but then adenoids are so frequently found in children that I think that there must remain a doubt as to any connexion between the two conditions.

"I cannot remember having seen any cases of the corneal type, i.e., phlyctenular keratitis, although one case, that of a young woman of 30 years of age, at first led me to believe I had discovered one. On more careful examination, and after a negative von Pirquet test, I detected some *acne rosacea* on the lower face, at the angle of the lips, with outlying spots near the eyes. This condition always had an acute exacerbation immediately prior to a renewed breakdown of the cornea. The diagnosis of acne was confirmed by a dermatologist.

"I am sorry to say that I have not been in the habit of examining the refraction in these cases, though, oddly enough, a case of a little boy of seven years, whom I am treating at present, was taken to see me by his parent because of some 'inflammation in his turned eye,' to use the parent's words.

"With regard to treatment, I have had all the cases placed under the care of the physician, who has carried out general hygienic treatment principles for his part, and atropine and yellow oxide of mercury have been ordered by myself. I find that, invariably, this clears up the condition, but I see to it that the general treatment is continued for some time.

"I am aware that these few remarks lack statistics, and that they are merely an expression of opinion, and can therefore be of only limited value; but I would enter a plea for such statistics from this out, and I would ask members if they would kindly keep some notes of cases, and supply our Society meetings with some for a period, say, of one year. These could then be edited, and due credit given of each record at the time of collecting and publishing.

"In conclusion, gentlemen, I have to thank you for a year of harmonious associations with the Society, and ask you to forgive any shortcomings in my efforts to uphold the position of President."

Dr. R. H. Jones, the Incoming President, took the chair.

Dr. Guy Antill Pockley showed a case of monocular episcleritis, which he had shown at the previous meeting. In addition to the condition then present, there was another nodule, quite as large as the first. He stated that he had sent the case to the dermatologist for the application of radium, which was refused.

The members were all agreed that the condition was very much worse, and while some regarded it as an extension of the scleritis, others were of the opinion that it was probably a malignant growth; but, before having the eye removed, the patient should have the benefit of the trial of radium.

Dr. Pockley promised to have this done and to produce the case at a future meeting.

Dr. J. C. Halliday showed a specimen of sarcoma of the ciliary body. Mrs. F.C., aged 45, showed a growth behind the iris of the right eye, visible on inspection. On June 13, 1918, the eye was removed. The specimen was prepared by Dr. Tebbutt.

Dr. Halliday was requested to show a section of the tumour at the next meeting.

The President thanked Dr. Halliday for bringing the exhibit for the members' inspection.

MEDICAL BENEVOLENT ASSOCIATION OF SOUTH AUSTRALIA (INCORPORATED 1882).

A special general meeting of the Medical Benevolent Association of South Australia was held on August 29, 1918, at the British Medical Association House, Hindmarsh Square, Adelaide.

The trustees and eleven other members were present. Dr. J. C. Verco (trustee) was voted to the chair, and he explained that this meeting, held by kind permission of the Council of the British Medical Association, was summoned to carry out the business of the annual meeting called early in the year, which meeting had lapsed for want of a quorum.

The Chairman referred to the death recently of Dr. T. W. Corbin, and outlined his relation with this Association from its inception. In 1881 he was appointed, together with Dr. C. Gosse and Dr. W. L. Cleland, "a subcommittee to draw up certain propositions respecting the starting of a medical benevolent fund." The first of these propositions was "That

an Association be formed, and that it be called the 'South Australian Medical Benevolent Association, Incorporated.' This was the beginning of what is now known as the Medical Benevolent Association of South Australia. Of this Association he was a member until his death. In 1905, when its Deed of Incorporation was amended, three special life members were created, viz., Dr. Thos. W. Corbin, of Adelaide, and Dr. T. E. F. Seabrook, of Broken Hill, as the surviving representatives of the former Medical Association of South Australia, and Dr. W. C. Cleland, of Adelaide, in recognition of his past services to this Benevolent Association. In the same instrument we read: "Present Committee—The Officers and Trustees for the year 1905 shall consist of Dr. T. W. Corbin, as President, J. B. Gunson, as Honorary Secretary, and W. L. Cleland, as Trustee." This office he filled until 1917, presiding at that annual meeting, after which he resigned the position.

The Honorary Secretary (Dr. J. B. Gunson) read the report for 1917, and presented the financial statement, which showed £800 invested in War Loan and Government Stock and (to present date) nearly £120 in the Savings Bank.

Dr. J. C. Verco and Dr. B. Poulton were elected trustees, and the former was also elected President. Dr. Gunson desired not to continue in office as Honorary Secretary, and proposed Dr. H. Gilbert, who was elected the third trustee and appointed Honorary Secretary.

Dr. Gunson was then elected a life member of the Association for his services since 1903.

The rules were altered so that the annual meeting should take place in March, and the rule requiring donations to be added to capital was altered, so that donations made for any specific purpose should be so expended.

The Council of the South Australian Branch of the British Medical Association was thanked for permission to hold this special meeting.

Correspondence.

SALIVA IN THE TREATMENT OF WOUNDS.

Sir,—In a number of a new French medical journal¹ recently to hand I noticed a letter from a Dr. Grevin. The idea seems to me to be so sufficiently suggestive and novel that I have put it into English in the accompanying translation.

Yours, etc.,

LEONARD W. BICKLE, F.R.C.S. (Edin).

Sydney, September 6, 1918.

"The unfortunate war which goes on so continuously has caused physicians and surgeons to make many researches, and repeated attempts to cure the numerous wounds of all kinds produced every day on the battlefield and in the towns systematically bombarded by the enemy.

"Of the new methods which have been created and extolled, certain ones have undeniably given excellent results, and their judicious employment, if it has failed in some instances, has been able to produce radical cures in others.

"I have read formerly somewhere that a dog which could lick his wounds cured them very quickly and without supuration, and I have since then recognized that it was often so in fact. The other day, I do not know how, I was reminded of this peculiar aphorism.

"I have sought in my old note books for what were the principal elements of the mixed saliva, and I am reminded that it was alkaline and that it contained at least ptyalin mucin, phosphates and lactates.

"I must say, also, that the administration of the Service of Health which has placed me at the kind service of the civil population of ——— has not placed at my disposal a medical library. Alas! if I had only one—to verify my reminiscences—or no more than a laboratory or a field for experiments to see if there be any truth in this old statement.

"But it has occurred to me that another, better informed, better advised, better equipped, and, above all, much more scientific might perhaps seek in one or several of the elements of the saliva and with them, produced by synthesis, for example, make something, I know not what, to treat and cure the too numerous wounds which continue to be the

despair, both of the wounded who suffer them and the surgeons who care for them.

"The justifiable employment in some cases of certain organic liquids may render plausible this idea, which I suggest to anyone interested—the idea which, if not altogether true, is perhaps at least probable."

SWALLOWING A NAIL.

Sir,—Dr. Kilvington has given a very interesting and informing account of surgical treatment for removal of a tooth plate impacted in the gullet. I venture to record a case of less surgical interest, but still of great importance, both to the patient and to the doctor.

A child, aged two years, swallowed a two-inch iron nail and greatly alarmed its parents. The advice given was to avoid aperients, to give solid food and to watch developments. After two days the nail was evacuated, and the child is none the worse.

Yours, etc.,

J. DE B. GRIFFITH.

Somerville, Victoria,

September 9, 1918.

We have learned with great regret just as we are proceeding to press that Sir Philip Sydney Jones, M.D. (Lond.), F.R.C.S. (Eng.), died at his residence, "Llandillo," Strathfield, New South Wales, early on the morning of September 18, 1918, at the advanced age of 82 years.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

The following have been registered under the provisions of the *Medical Act, 1912 and 1915* as duly qualified medical practitioners:—

Markson, Ernest, M.B., Bac. Surg., 1915, Univ. Melbourne.
Francis, Richard Powell Waugh, M.B., Mast. Surg., 1916, Univ. Sydney.

Additional registration:—

Jensen, Frederick Jorgen, Mast. Surg., 1918, Univ. Sydney.
Kirkwood, Noel Edmund Barton, Mast. Surg., 1918, Univ. Sydney.

Potts, Theodore Kenneth, Mast. Surg., 1918, Univ. Sydney.

QUEENSLAND.

The undermentioned has been registered, under the provisions of *The Medical Act of 1867* as a duly qualified medical practitioner:—

Kortum, Ludwig August, *Cooktown*, M.B., Univ. Syd., 1917.

Additional Registration:—

McKenzie, Arthur Duncan, *Toowoomba Hospital*, Ch.M. Univ. Syd., 1918.

VICTORIA.

The following have been registered under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified medical practitioners:—

Frank Sturges, Ballarat, L.R.C.P., Lond., 1884; L.R.C.S., Edin., 1883; L.S.A., Lond., 1882.

James Chambers Craig, Williamstown, M.B. et Ch.B., Melb., 1910.

Names of deceased practitioners removed from the Register:—

Francis Ernest Dunkley.

William Henry Gaze.

David Skinner.

James Herbert Ingham.

¹ *Journal de Médecine de Bordeaux*, No. 5, p. 140, May, 1918.

Births, Marriages and Deaths.

The charge for inserting announcements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps, with the notice, to arrive not later than Tuesday morning in order to ensure insertion in the current issue.

MARRIAGE.

MALCOLM—JONES.—On August 31, 1918, at St. Stephen's Church, Phillip Street, Sydney, John Malcolm, M.B., Ch.M. (University of Sydney), to Maude Sydney Jones, M.B., Ch.M. (University of Sydney).

Medical Appointments.

The appointment of Dr. A. H. Clarke (B.M.A.), Assistant Health Officer, Department of Public Health, as Acting Chief Health Officer for Tasmania, pending the appointment of a successor to Dr. C. L. Park, is to take effect from September 1, 1918.

It is announced in the *Queensland Government Gazette* of September 1, 1918, that Dr. L. J. J. Nye (B.M.A.) has been appointed Government Medical Officer at Atherton, Queensland.

Dr. C. L. Park (B.M.A.) has been appointed Chief Quarantine Officer for the State of Victoria.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xiii.

In future, no advertisements inviting applications from medical practitioners for positions in public institutions will be accepted unless the appointment is limited to medical practitioners who are ineligible for military service, or who have returned from military service. The term "ineligible for military service" is used to signify practitioners who are above military age, those who have offered their services and have not been accepted by the military authorities, or those who, for valid reasons, are incapable of applying for a commission in the Australian Army Medical Corps.

Department of Public Instruction, New South Wales, Medical Officer.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other contract practice. Australian Prudential Association Proprietary, Limited. National Provident Association. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Rockhampton Associated Friendly Societies. Cloncurry Hospital.
SOUTH AUSTRALIA. (Hon. Sec., 2 North Terrace, Adelaide.)	Contract Practice Appointments in South Australia. Contract Practice, Appointments at Renmark.

Branch.	APPOINTMENTS.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
TASMANIA. (Hon. Sec., Macquarie Street, Hobart.)	Medical Officers in all State-aided Hospitals in Tasmania.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

- Sept. 24.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
 Sept. 25.—Vic. Branch, B.M.A., Council.
 Sept. 26.—S. Aust. Branch, B.M.A.
 Sept. 27.—N.S.W. Branch, B.M.A., Election of Two Members of Federal Committee.
 Sept. 30.—Vic. Branch, B.M.A., Election of Two Members of Federal Committee.
 Oct. 1.—N.S.W. Branch, B.M.A., Council (Quarterly).
 Oct. 2.—Vic. Branch, B.M.A.
 Oct. 4.—Q. Branch, B.M.A.
 Oct. 4.—Annual Meeting of Delegates of Local Associations of N.S.W. with the Council of N.S.W. Branch (first day).
 Oct. 8.—Tas. Branch, B.M.A., Council and Branch.
 Oct. 8.—N.S.W. Branch, B.M.A., Ethics Committee.
 Oct. 11.—S. Aust. Branch, B.M.A., Council.
 Oct. 11.—N.S.W. Branch, B.M.A., Clinical.
 Oct. 15.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
 Oct. 16.—W. Aust. Branch, B.M.A.
 Oct. 17.—Vic. Branch, B.M.A., Council.
 Oct. 18.—Q. Branch, B.M.A., Council.
 Oct. 18.—Eastern Suburbs Med. Assoc. (N.S.W.).
 Oct. 19.—Northern Suburbs Med. Assoc. (N.S.W.).

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.